

University of Portland

Pilot Scholars

Graduate Theses and Dissertations

2021

Do I Even Belong Here? : An Examination of Impostor Phenomenon Among First- Generation College Seniors and the Perceived Factors that Contribute to Resilience and Persistence on the Journey to Graduation

Yvonne Tracy Ayesiga

Follow this and additional works at: <https://pilotscholars.up.edu/etd>



Part of the [Educational Psychology Commons](#), [Higher Education Commons](#), and the [Student Counseling and Personnel Services Commons](#)

Recommended Citation

Ayesiga, Yvonne Tracy, "Do I Even Belong Here? : An Examination of Impostor Phenomenon Among First- Generation College Seniors and the Perceived Factors that Contribute to Resilience and Persistence on the Journey to Graduation" (2021). *Graduate Theses and Dissertations*. 96.
<https://pilotscholars.up.edu/etd/96>

This Doctoral Dissertation is brought to you for free and open access by Pilot Scholars. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Pilot Scholars. For more information, please contact library@up.edu.

“Do I Even Belong Here?” An Examination of Impostor Phenomenon Among First-
Generation College Seniors and the Perceived Factors that Contribute to
Resilience and Persistence on the Journey to Graduation

By

Yvonne Tracy Ayesiga

A dissertation submitted in partial fulfillment
of the requirements for the degree of

Doctor of Education
in
Leading and Learning

University of Portland
School of Education

2021

**“Do I Even Belong Here?” An Examination of Impostor Phenomenon Among
First-Generation College Seniors and the Perceived Factors that Contribute to
Resilience and Persistence on the Journey to Graduation**

by

Yvonne Tracy Ayesiga

This dissertation is completed as a partial requirement for the Doctor of Education (EdD) degree at the University of Portland in Portland, Oregon.

Approved:

<p>DocuSigned by: REDACTED 3930CD47ACC44D8...</p>	<p>_____ Chairperson</p>	<p>_____ Date</p>
<p>DocuSigned by: REDACTED 9C84D4D6548045A...</p>	<p>_____ Committee Member</p>	<p>_____ Date</p>
<p>DocuSigned by: REDACTED C6F6B876E82B418...</p>	<p>_____ Committee Member</p>	<p>_____ Date</p>

If applicable:

<p>_____ Additional Committee Member</p>	<p>_____ Date</p>
<p>_____ Additional Committee Member</p>	<p>_____ Date</p>

Approved:

<p>DocuSigned by: REDACTED BBBD3ABC0198425...</p>	<p>_____ Graduate Program Director</p>	<p>_____ Date</p>
<p>DocuSigned by: REDACTED 4F-D10E3881BD44D...</p>	<p>_____ Dean of the Unit</p>	<p>_____ Date</p>
<p>DocuSigned by: REDACTED 4F-D10E3881BD44D...</p>	<p>_____ Dean of the Graduate School or Representative</p>	<p>_____ Date</p>

Abstract

This mixed methods study explored the lived experiences of first-generation college seniors to develop a deeper understanding of the presence of impostor phenomenon during their college journey. Through a social constructivist lens, this study focused on the lived experiences of first-generation college seniors. This resulted in the understanding of how impostor phenomenon manifests among first-generation students and how perceived experiences of resilience and persistence aided the first-generation students on the journey to graduation. This study defined first-generation students as those whose parents did not attend college at all. The study sample consisted of 51 first-generation college seniors who completed the survey, six also participating in interviews. Data were analyzed through analysis of survey feedback consisting of three scales used to measure impostor phenomenon, resilience and persistence, as well as key themes that arose through descriptive statistics, interviews, and coding. Findings revealed first-generation college students experience impostor phenomenon and struggle with the question, “Do I belong here?” In addition, the findings showed a need to learn how to be confident, overcome self-doubt, navigate campus culture, and ask for help. Recommendations emerged for future first-year first-generation students, parents of first-generation students, professors, and financial aid counselors.

Keywords: first-generation college students, seniors, impostor phenomenon, impostor syndrome, resilience, persistence, higher education

Acknowledgements

The African saying that goes, it takes a village to raise a child has never rung truer than in my case. My entire education journey has underscored the importance of having a support system of people that have rooted for me. I am grateful to all my teachers in Uganda, New Mexico, Iowa, and Oregon. To Mr. Samuel Kyewalanga, Mr. Amos Gitta, Mr. Herbert Walugembe, Mr. Godfrey Bazanye, Connie Mutazidwa, and Shelby Davis, thank you for believing, and taking a chance on me.

I am especially grateful to the staff and faculty at the University of Portland who have supported me along this journey, particularly Dr. Eric Anctil, my chair who constantly reminded me to *keep evolving and to stay human*, Dr. Ben Gallegos, and Dr. Deidre Katz who served on my dissertation committee. Thank you, Dr. Ralston, Dr. Hetherington, Stephanie Michel, Dr. Trout, Dr. Aihokhai, Dr. Conteras, Mike Pelley, the physical plant staff, and my former colleagues in residence life.

Thank you to Dr. Thomas Dickson for your advice, conversation and resources on impostor phenomenon among first-generation college students and for accepting to be a part of my “unofficial” committee. Thank you to Dr. Pauline Clance for permitting me to use your impostor phenomenon scale. Thank you, Dr. Jonathan Davidson for allowing me use the CD-RISC-25 scale in my study. Thank you Deane Waintraub Stafford at the Center for First-generation Student Success for your help with data collection.

I am grateful to my mentors throughout my student affairs career, as they have helped instill in me a deep understanding of intentional service, resilience, and

persistence. Dr. Chris Haug, thank you for your supervision and friendship. Thank God for the divine providence that brought us together in the spring of 2016 in Indianapolis.

This doctoral journey has been a family effort. I am especially grateful to my parents: Tom & Grace, Zak & Sarah, Carmela & Tom. Thank you for the gift of love and all the sacrifices you have made for me along the way. Thank you to my father Amooti for never compromising on education and ensuring that receiving a quality education was non-negotiable. Thank you to my siblings, Arnold and Edith for always praying for me and cheering me on.

To my friends, Dr. Namirembe, Nneka, Pearl, Gena, David, and Aduago, thank you for holding me down and being the prayer warriors, I needed during times I almost gave up.

A special note of gratitude to the first-generation college students that gave meaning and a voice to this study. You are valid and yes, you ‘belong here.’

Thank you to Cohort 6 and especially my PLC. The future of education is in great hands with all of you. It has been a blessing going on this journey with you all.

I am deeply grateful to Harrison. Without your support, encouragement, wisdom, and sacrifices, this project would never have been realized.

To the professor who once told me I should never show my writing to anyone. Your words of discouragement caused me endless impostor phenomenon but also fueled my zeal to work hard and finish this project.

Above all, thank you to my lord and savior. God, I am nothing without you.

Dedication

This dissertation is dedicated to my mother, Grace Nakimuli Isingoma. Maama wange, thank you for being the cornerstone and prayer warrior of our family. The greatest honor of my life is being your daughter.

Table of Contents

Abstract	iii
Acknowledgements	iv
Dedication	vi
Table of Content	vii
List of Figures	x
List of Tables	xi
 Chapter 1: Introduction	 1
Impostor Phenomenon	3
Purpose Statement	6
Research Questions	6
Significance	8
Theoretical Framework	10
Definitions	11
Summary	12
 Chapter 2: Literature Review	 14
Literature Search Strategy	15
Theoretical Framework	16
Self-efficacy	16
Cultural and Social Capital	17
First-generation College Students in Higher Education	19
Impostor Phenomenon	22
Symptoms and Characteristics of Impostor Phenomenon	23
Psychological Effects of Impostor Phenomenon and Negative Consequences	24
Fear of Success and Failure	25
Fear of Negative Evaluation	27
Perfectionism	28
Resilience	29
Motivation	31
Institutional Support	33
Social Life	34
Persistence	35
Campus Engagement	36
Mental Health	37
Parents and Family Involvement	38

Academic Preparation	40
Academic Integration	41
Advising, Support, and Mentors on College Campuses	43
Research Gap	45
Summary	45
 Chapter 3: Methodology	 47
Purpose Statement and Research Questions	47
Research Design and Rationale for Methodology	48
Participants and Context	50
Instrumentation	54
Survey	54
Clance Impostor Phenomenon Scale (CIPS)	54
The Connor-Davidson Resilience Scale (CD-RISC-25)	55
The Grit Scale	56
Survey Sampling	57
Homogenous Sampling	57
Purposeful Sampling	58
Interviews	58
Interview Sampling	60
Purposeful Sampling	60
Data Collection and Design Procedures	61
Phase One	61
Phase Two	62
Pilot	62
Role and Positionality of the Researcher	63
Ethical Considerations	64
Data Analysis	65
Survey Data	65
Interview Data	65
First Cycle Coding	66
Code Mapping	67
Second Cycle Coding	67
Credibility	67
Transferability	68
Dependability	68
Confirmability	68
Assumptions	68
Summary	69

Chapter 4: Data and Analysis	71
Purpose Statement	71
Research Questions	71
Participants Demographics	72
Researcher Positionality Revisited	74
Phase One: Quantitative Data Findings	76
Clance Impostor Phenomenon Findings	77
Grit Scale Findings	79
Connor-Davidson Resilience Scale Findings	82
Phase Two: Qualitative Data Findings	83
Key Themes	83
Identity	84
Self-doubt	86
Sum up of Experiences	87
Impostor Phenomenon	91
Cultural and Social Capital	94
Comparison to other Students	97
Campus Culture	99
Resilience and Persistence Factors	100
Family Aspects	103
Pride	104
Understanding and Encouragement	105
Finances	105
Summary	107
 Chapter 5: Summary, Discussion, and Implications	 108
Summary of the Study	108
Overview of the Problem	108
Purpose Statement and Research Questions	109
Review of Methodology, Overview of Sample, Data Collection, and Analysis.....	110
Synopsis of Data Analysis	110
Findings	112
Impostor Phenomenon	112
Self-doubt	113
Comparison to Others	114
Experiences of Resilience and Persistence	115
Grit Scale Findings	115
Resilience Scale Findings	116

Interview Findings Related to Resilience and Persistence	116
Conclusion	117
Limitations	118
Recommendations	119
Recommendations for Future First-generation Students	119
Recommendations for Parents of First-generation Students	120
Recommendations for Higher Education	121
Recommendations for Professors	123
Future Research	125
Concluding Remarks	126
References	129
Appendix A: IRB Approval from the University of Portland	155
Appendix B: Permission to use Clance Impostor Phenomenon Scale	156
Appendix C: Permission to use Connor-Davidson Resilience Scale	157
Appendix D: Email to Potential Survey Respondents	158
Appendix E: Survey	160
Appendix F: Email to Potential Interview Participants	161
Appendix G: Email to Interview Participant Prior to Interview	162
Appendix H: Interview Protocol and Questions	163

List of Tables

Table 1: <i>Study Participants Demographics</i>	52
Table 2: <i>Participant Majors</i>	53
Table 3: <i>Clance Impostor Phenomenon Participant Demographics</i>	55
Table 4: <i>Connor-Davidson Resilience Scale Participant Demographics</i>	56
Table 5: <i>Grit Scale Participant Demographics</i>	57
Table 6: <i>Interview Participants' Demographics</i>	74
Table 7: <i>Participants Demographics for the Connor-Davidson Scale, Grit Scale, and Clance Impostor Phenomenon Scale Results</i>	77
Table 8: <i>Impostor Phenomenon Scale Frequencies</i>	78
Table 9: <i>Clance Impostor Phenomenon Scale Scores by Gender</i>	78
Table 10: <i>Impostor Phenomenon Experiences by Gender and Race</i>	79
Table 11: <i>Descriptive Statistics for Grit Scale by Gender and Race</i>	80
Table 12: <i>Resilience Scale Experiences by Gender and Race</i>	82
Table 13: <i>Study's Key Themes and Sub Themes</i>	84

List of Figures

Figure 1: <i>Theoretical Framework Map of Literature Review</i>	16
Figure 2: <i>Flowchart Showing Explanatory Sequential Design of Mixed Methods Research</i>	50
Figure 3: <i>Histogram of Grit Scale for Male Participants</i>	81
Figure 4: <i>Histogram of Grit Scale for Female Participants</i>	81

Chapter 1: Introduction

As America's higher education system continues to educate a diverse student population, the importance of supporting various student demographics is essential to student success. According to the Association of American Colleges and Universities (2019), the student population in America's institutions of higher education is more diverse than ever before. A report by the American Council on Education (2019) conveyed that students of color made up about 30% of the undergraduate student population in 1996, with this number increasing to 45% in 2016. In the past few decades, America's higher education system has seen an increase among historically minority student groups in addition to diversity in general (John & Stage, 2014). The National Center for Education Statistics (2013) reported the number of minority students attending institutions of higher education is expected to increase significantly. Among the historically minority student group, many are first-generation college students who are first among their immediate family to go to college (Saenz, Hurtado, Barrera, Wolf, & Yeung, 2007). America's institutions of higher learning are increasingly admitting first-generation college students (Stephens, Fryberg, Markus, Johnson, & Covarrubias, 2012).

There are varying definitions of who first-generation college students are. Institutions of higher education, governing agencies, and various researchers often define first-generation students as those whose parents have no college or post-secondary experience (Chen & Carroll, 2005; Choy, 2001; Horn & Nunez, 2000; Nunez & Cuccaro-Alamin, 1998; Pryor, Hurtado, Saenz, Lindholm, Korn, &

Mahoney, 2006). Moreover “1 in 6 students fits into the definition of a first-generation college student, which is often defined as a student whose parents have earned a high school diploma or less” (Irlbeck, Adams, Akers, Burris, & Jones, 2014, p. 154). While there are varying definitions of who first-generation students are, this study focuses on defining first-generation students as those whose parents did not attend college at all. Engle and Tinto (2008) reported a large population of about 4.5 million students in the last decade identified as first-generation students entering institutions of higher education in America. This number continued to grow, during the 2015-16 academic year, citing 56% of undergraduates nationally were first-generation college students (Center for First-generation Student Success, 2019).

It is also important to note that high percentages of college enrollment do not translate into persistence and degree completion for first-generation students. According to Center for First-Generation Student Success (2019), six years after entering postsecondary education, approximately 56% of first-generation students and 40% of those continuing-generation students had not completed their degree.

Despite the increase in student body diversity, many areas of America’s higher education continue to underserve and underrepresent students of color and other minority student groups specifically, first-generation students (Espinosa, Turk, Taylor, & Chessman, 2019). Regardless of how institutions of higher education or researchers define first-generation students, this minority student group continues to generate strong interest.

Research shows that compared to their peers, first-generation students have little to no academic preparation, varied motivation for attending college, wide-ranging levels of persistence and resilience, parental support, involvement, mentorship, and experience substantial barriers to their academic journey and success (Saenz et al., 2007). The lack or varied presence of such factors as parental support point to key aspects of social and cultural capital that often first-generation students lack in order to succeed.

First-generation students are often underprepared academically for what is expected of them. They often lack some of the basic *insider knowledge* on how to navigate finances, mental health, college social life adjustment, in addition to academic integration and how to interact with their college staff and faculty in and outside the classroom (Brewer, 2011; Chaney, Muraskin, Cahalan, & Goodwin, 1998; Hsaio, 1992; York-Anderson & Bowman, 1991). These deficits distinguish first-generation students from their non-first-generation peers and makes this population of students critical to study.

Impostor Phenomenon

One of the substantial barriers first-generation students face during their college journey is impostor phenomenon. In order to explore impostor phenomenon among first-generation college seniors, a closer look at the perceived experiences related to resilience and persistence is important as well. Impostor phenomenon has been defined as an internal experience that has been observed to occur in high-achieving individuals who do not believe their achievements are due to their own

abilities or hard work (Wilke, 2018). Impostor phenomenon was first documented by Clance and Imes (1978) who asserted that people who experience impostor phenomenon do not see themselves as intelligent or deserving of their accomplishments. Clance and Imes (1978) further described impostor phenomenon as a psychological experience of intellectual and professional fraudulence or as the internal experience of intellectual phoniness according to (Matthews & Clance, 1985).

Although originally studied and observed among a group of successful females and described as a predisposition unique to successful people (Clance & Imes, 1978), impostor phenomenon is not limited to only successful people according to (Harvey, 1981). Impostor phenomenon is experienced when people are faced with achievement responsibilities regardless of their success or gender (Harvey & Katz, 1985). Research shows the fear of being found out or exposed as a fraud is associated with negative self-beliefs such as anxiety, depression, and lack of resilience among individuals who experience impostor phenomenon (Chrisman, Pieper, Clance, Holland, & Glickauf-Hughes, 1995; Cozzarelli Major, 1990).

This study will further close a gap in the data of self-reported experiences of first-generation students by exploring their lived experiences to better understand the presence, or lack thereof, of impostor phenomenon during their college journey. Earlier research studies about impostor phenomenon are not just about *'impostor phenomenon and first-generation college students 'experiences.'* Studies such as Blackmon (2018) combines impostor phenomenon and the experiences of first-generation students of color at a predominately white institution, highlighting the

unique challenges first-generation college students of color face while attending a predominately white institution. This study will provide data and analysis that focuses solely on impostor phenomenon among first-generation college students without adding other factors such as being female, students of color, or enrolled in STEM fields. Blackmon's study like many studies about impostor phenomenon among first-generation students focuses on students from one school. This study investigated impostor phenomenon among a diverse sample of first-generation college students. By taking a diverse sample, this study provided a larger picture of the experiences with impostor phenomenon among first-generation college students.

Furthermore, this study sought to address a gap in the literature on first-generation student experiences. Existing research has focused on the challenges first-generation students face because of their first generation-student status and being mostly low-income students and students of color. Lynch (2013) reported approximately 49% of Latino students and 45% of African American students identified as first-generation students. Lynch, (2013) further found about 60% of the US college population identified as first-generation students, yet institutions of higher education still maintain their traditional model of catering to traditional middle/upper and non-first-generation college students. Administrators, faculty members, and policymakers should continue to utilize research aimed at gathering raw data on first-generation students' lived experiences and how those relate to impostor phenomenon as an invisible barrier to college success.

Purpose of the Study

The purpose of this mixed methods research study was to explore the lived experiences of first-generation college seniors to understand the presence of impostor phenomenon during the journey to graduation. The study seeks to understand how impostor phenomenon manifests among first-generation students. In addition, this study examined how perceived experiences of resilience and persistence among first-generation students relate to the presence of impostor phenomenon. To further investigate impostor phenomenon among first-generation college students, and their experiences related to resilience and persistence, the following research questions were targeted:

1. Do first-generation students experience impostor phenomenon during their journey to graduation?
2. If experienced, in what ways do students experience impostor phenomenon?
- 2b. How do students describe experiences of impostor phenomenon?
3. What perceived factors contribute to the resilience and persistence of first-generation students on the journey to graduation?

The goal of this research was to explore the lived experiences of first-generation college seniors to understand the presence of impostor phenomenon during their college journey. The ultimate aim of the research was to understand how first-generation students deal with the presence of impostor phenomenon in their lived experiences. Findings from this study will assist professionals in higher education that

work closely with this critical student population in supporting them through this invisible barrier toward academic success.

Through the quantitative research phase, a Qualtrics survey with containing the impostor phenomenon measurement scale, the resilience scale and grit scale was used by the researcher to measure the presence, or lack, thereof impostor phenomenon among the first-generation college students and their experiences of resilience and persistence. The survey instrument was sent out to the first-generation college seniors through the Center for First-Generation Student Success, a national membership organization for institutions of higher education that support first-generation students, in addition to other social media platforms that engage first-generation college students around the country. Approximately 150 first-generation college seniors were solicited to participate in the study. Of that number, 230 responded to the survey and 51 fully completed the survey ($n = 51$). The qualitative phase of the study included six interview questions with 21 participants indicating they were interested in being interviewed. Of the 21, only 10 signed up for interviews. Out of the 10, six interviews were considered for the study. Participants were asked if they experienced impostor phenomenon, and if they did, to describe those feelings or actions of impostorism. The participants were asked if feelings of impostor phenomenon continued to manifest throughout their college journey from their first year to senior year. Lastly, the participants were asked to name and explain experiences of resilience and persistence that have helped them or hoped would have helped them navigate impostor phenomenon during the four years of college. Survey and interview analyses helped to

identify themes related to the presence of impostor phenomenon, experiences contributing to the presence of impostor phenomenon and lived experiences of resilience and persistence that helped students navigate impostor phenomenon. The last question in the survey asked participants to indicate, by providing an email address, if they wanted to be contacted for a 30-minute interview. The goal of conducting interviews was to speak directly with the first-generation students to gather their lived experiences around impostor phenomenon and their narratives of resilience and persistence.

Significance

This study provides a better understanding of first-generation students' experiences and how they navigated college, even when experiencing impostorism. By analyzing the responses of the participants, this study obtained a deeper understanding of what impostor phenomenon looks like for first-generation students and how they navigated the feelings of impostorism from their first to senior year.

Impostor phenomenon has been studied in relation to other variables such as gender (Harvey, 1981; Topping & Kimmel, 1985), various ethnic groups (Chae, Piedmont, Estadt, & Wicks, 1995), and with persons of various occupations (Bechtoldt, 2015; Want & Kleitman, 2006). This study contributes to the list of studies on impostor phenomenon, specifically among first-generation college students. Findings from the study will inform the administrators, staff, faculty, and policymakers who work in higher education about the experiences of first-generation seniors and how their resilience and persistence served them from their freshman to

senior year in the presence of impostor phenomenon. Researchers, educators, policymakers, and staff members who work closely with first-generation students will benefit from this study through the examination of the resilience and persistence data of the first-generation students and discover tools and ways to help support first-generation students at their institutions cope with impostor phenomenon.

Rarely addressed in the existing literature are the experiences of successful students, the barriers they face while adapting to and persisting through college, and what factors help them persist in college to degree completion (Colman, 2015). Therefore, this study sought to explore the experiences of resilience and persistence of first-generation students who have successfully continued to the senior year. In support of an investigation of impostor phenomenon in first-generation students, this study examined literature from three primary areas: impostor phenomenon, resilience, and persistence experiences of first-generation college students.

Higher education administrators, faculty, student affairs officers, and policymakers must continue to understand the characteristics and unique needs of first-generation students in order to better serve this student population. Resources such as tutoring, mentorship, student engagement, mental health counseling, and financial aid advising that help first-generation students effectively enter, transition into, persist, and graduate from college should be made available and intentionally prioritized to assist this sometimes vulnerable student population as they seek degree completion.

Theoretical Framework

Researchers bring certain “beliefs and philosophical assumptions to research” that help to highlight the importance of not only the understanding of beliefs and theories that inform research, but also actively helps researchers write about them in their studies (Creswell & Poth, 2018, p. 15). This study is grounded in the social constructivism theoretical framework, a learning theory based on the concepts of Vygotsky (1978) that human development is socially positioned, and knowledge is constructed through sharing of ideas and interaction with others. Creswell (2009) stated the social constructivism framework serves as a useful theoretical framework because it allows for useful qualitative analysis to explore lived experiences of the individuals under study. Hence, grounding this study in the social constructivism framework allows for identifying the resilience and persistence experiences of first-generation seniors and how those lived experiences inform our understanding of the presence, or lack thereof, of impostor phenomenon among first-generation seniors.

My worldview as a researcher is centered around my own experiences as a first-generation college student, an immigrant from a developing world country, a female, and person of color. These descriptors of myself made me fully aware of my biases going into this study and reminded me to check them while also exploring the experiences of the first-generation students in the study. Stating my background and connection to the study helped form my philosophical assumptions centered around access and equality in higher education for historically minority populations like first-generation students. By exploring the experiences of first-generation seniors, this

study contributes to the body of literature of this underserved and often underrepresented student population. In order to improve access and equality in higher education for all students, researchers need to include student experiences. Lived experiences are the fundamental qualitative evidence that help provide a framework to the current research on this critical population of students in higher education.

Definitions

First-generation student: a student whose parents have no college or post-secondary experience (Chen & Carroll, 2005; Choy, 2001; Horn & Nunez, 2000; Nunez & Cuccaro-Alamin, 1998; Pryor, Hurtado, Saenz, Lindholm, Korn, & Mahoney, 2006; Saenz, Hurtado, Barrera, Wolf, & Yeung, 2007).

Senior: a student in the fourth (final) year of college/university (Narayan, 2011).

Impostor Phenomenon: individual's feelings of not being as capable or adequate as others may perceive or evaluate them to be. Symptoms include feelings of phoniness and self-doubt (Clance, 1985). Impostor phenomenon can also be defined as an internal experience that has been observed to occur in high-achieving individuals who do not believe that their achievements are due to their own abilities or hard work (Wilke, 2018).

Impostorism: refers to those individuals who are successful in their jobs yet doubt their abilities (Bechtoldt, 2015).

Resilience: when applied to education, resilience describes a quality in students who still succeed at a high level regardless of economic, cultural, familial, or other social barriers (Cabrera and Padilla, 2004, p. 152).

Persistence: the percentage of students who return to college at any institution any given term year-to-year (National Student Clearinghouse Research Center, 2019).

Center for First-generation Student Success: the Center for First-generation Student Success launched in June 2017, with the mission of being the premier source of evidence-based practices, professional development, and knowledge creation for the higher education community to advance the success of first-generation students (Center for First-generation Student Success, 2019a).

First-gen Forward: the Center for First-generation Student Success launched First-gen Forward as the nation's first recognition program acknowledging higher education institutions for their commitment to first-generation student success (Center for First-generation Student Success, 2019b).

Summary

Institutions of higher education need to adapt to meet the needs of the number of first-generation college students. To do this, they need to first understand the reality of the students' day-to-day lives by exploring their lived experiences and identifying barriers to entry, persistence, and graduating from college. This study provides new insight into the lives of first-generation college students, especially seniors, who have had to navigate feelings of impostor phenomenon and impostorism as they persist through college and prepare to graduate.

This study is organized into five chapters. Chapter 1 of this study introduces the population of first-generation college students and why it is important to focus on them. The concept of impostor phenomenon, as an invisible barrier faced by first-generation students, is introduced. The purpose of the study was to explore the lived experiences of first-generation college seniors to understand the presence of impostor phenomenon during their college journey. A synthesis literature review on impostor phenomenon, resilience, and persistence is discussed in Chapter 2. Chapter 3 discusses the methodology used in the study and the findings of the study to address the research questions are presented in chapter 4. Finally, a discussion of the findings and proposed recommendations to support first-generation students and future research are outlined in Chapter 5.

Chapter 2: Literature Review

The purpose of this mixed methods study was to explore the lived experiences of first-generation college seniors to understand the presence of impostor phenomenon during their college journey. The study sought to understand how impostor phenomenon manifests among first-generation students and to identify the perceived factors of resilience and persistence that have aided the students on their journey to degree completion.

This chapter is presented in six sections and covers the fundamental and current state of literature around the topic of impostor phenomenon and the lived experiences of resilience and persistence of first-generation college students. First, a literature search strategy is established to show how literature pertinent to the study was found. Second, an overview of the theoretical framework and theories supporting the study are discussed. Third, an overview and profile of who first-generation college students are as a population and why it is important to research this student population is discussed. Fourth, impostor phenomenon is examined and a guide to the symptoms and characteristics of impostor phenomenon are presented. Fifth, several experiences of resilience and persistence which may contribute to the presence, or lack thereof, of impostor phenomenon among first-generation students are explored such as motivation, institutional support, mental health, and parental/family involvement. Finally, the chapter is summarized.

Literature Search Strategy

The literature search process aimed to identify research relevant to impostor phenomenon among first-generation college students. The research identified subject areas in higher education literature as key entry points for the search process. As a result, four primary databases were used to gather relevant literature: (a) Education Source; (b) ERIC (Educational Resources Information Center); (c) ProQuest Dissertations; and, (d) SAGE. The terms used to identify articles and relevant literature included the following: *impostor phenomenon*, *impostor syndrome*, *first-generation college students*, *minority student groups*, *experiences of resilience*, and *persistence*. Search terms related to impostor phenomenon revealed studies around impostor phenomenon in minority populations such as women in STEM fields, graduate students of color, and women in academia. Search terms tied to higher education and first-generation students were used in the Education Source, ERIC and APA PsycInfo databases to identify prior research involving these topics. Through this process, I discovered that most of the relevant literature on impostor phenomenon is found in dissertations while literature on lived experiences of resilience and persistence mainly existed in peer-reviewed journal articles. This study will add to the literature on the topic of impostor phenomenon among first-generation students and their lived experiences to the body of research.

This study and subsequent literature aimed to explore four threads of research relevant to the study. The threads are: (a) the theoretical lenses of this study including cultural and social capital and self-efficacy; (b) first-generation college students; (c)

impostor phenomenon; (d) and, the experiences of resilience and persistence as illustrated in Figure 1.

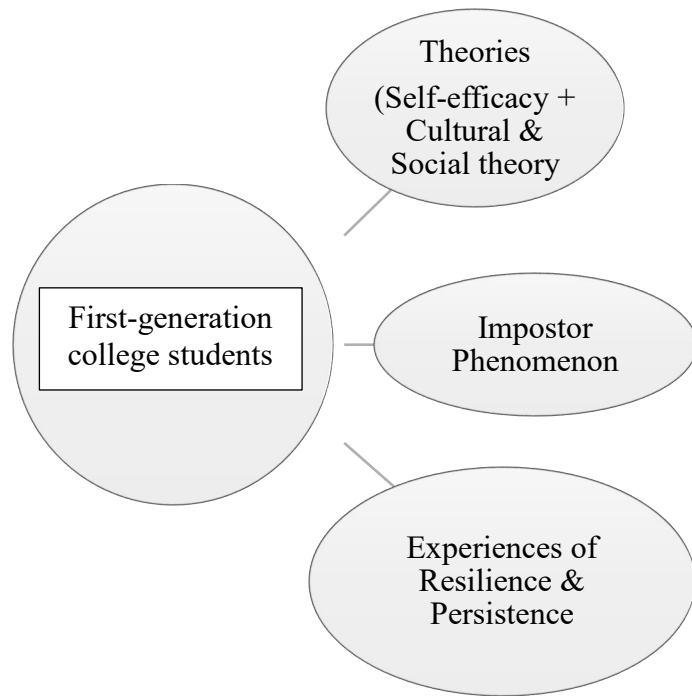


Figure 1. Theoretical framework map of the literature and the relationship to the study.

Theoretical Framework

Self-efficacy. Self-efficacy is a vital theory in which to ground the literature of this study because it helped the researcher understand how first-generation college students who may, or not, struggle with impostor phenomenon view their relationship with academic satisfaction and academic success. Self-efficacy is an important individual variable of Bandura's Social Cognitive Theory (Bandura, 1986). Bandura (1997) defined self-efficacy as "an individual's belief in their own ability to organize and implement action to produce the desired achievements and results" (p. 3).

Research has suggested a strong correlation between self-efficacy and a positive prediction of academic performance in various subjects (Schunk, Pintrich, & Meece, 2008; Usher & Pajares, 2008). Usher and Pajares (2008) further argued that self-efficacy helps to “predict students’ academic achievement across academic areas and levels” (p.751). Therefore, self-efficacy can contribute directly, or indirectly as a predictor of student academic achievement, behavior, and persistence (Domerech-Betoret, Abellan-Rosello & Gomez-Artiga, 2017). Students with great self-efficacy tend to have better academic performance and expectations than those students with low self-efficacy (Chemers, Hu & Garcia, 2001). This goes to highlight a direct correlation between a student’s self-efficacy and better academic performance.

Cultural and Social Capital. Sociologist Pierre Bourdieu examined social and cultural capital; concepts that have since been used to examine the economic capital that can be gained from having meaningful social relationships. Bourdieu (1977) argued that cultural capital requires understanding of the dominant culture in a society and the ability to recognize and use educated language (p. 494). Cultural capital in this context, refers to self-guided knowledge of higher education. Individuals with higher cultural capital tend to do better in school (McDonough, 1997). For example, in their study about first-generation and traditional college students’ understanding of faculty expectations, Collier and Morgan (2008) noted that:

Cultural capital “refers to the preexisting knowledge about interacting successfully in academic settings, including such essentially social skills as the

ability to recognize and respond to the standards faculty members use when they evaluate assignments. (p. 429)

Social capital has been defined as the social support of a young individual's interpersonal network and the access to institutional privileges and resources (Staton-Salazar, 1997). Therefore, the role cultural and social capital play in the success of first-generation students cannot be understated. Cultural and social capital theories have been used in research to focus on the access and retention of students, in addition to highlighting the knowledge, or lack of knowledge students may have to be successful in college (McDonough, 1997).

According to Lin (2001), social capital is based on relationships that can be used to facilitate access to resources such as mentors. Lin's observation is supported by Nichols and Islas (2016) who asserted that students who know more college-educated people than their peers tend to procure better college related social capital leading them to have a higher advantage in college. First-generation students predictably lack social capital, which is needed to help navigate through college and, as a result, have inadequate college-related cultural capital (Peralta & Klonowski, 2017, p. 631). McDonough (1997) argued that students whose parents have no notion of either social or cultural capital regarding college are not able to help their children succeed in college or navigate academics. This lack of social and cultural capital can lead students to look for other forms of social and cultural capital in the quest for academic success (Yeh, 2010).

Yeh (2010) further explored the persistence of low-income first-generation students. She found that approximately 50% of students that were identified as low-income and first-generation did not complete their postsecondary degree, and that the rates were higher than their middle- or higher-income peers. The study found that low-income first-generation students were more successful when they had peer or faculty mentors, participated in co-curricular activities, and were active participants in the classroom. All those factors attributed to their success, alongside the service-learning component. According to Yeh (2010), the students had found purpose and a sense of understanding, developed resilience, and gained critical consciousness. Yet, there was a lack of critical consciousness that these students had culturally, politically or even about their own socioeconomic status. In other words, it is very difficult to pose questions that challenge institutional systems and gain cultural capital if students are unacquainted with the questions to ask. Yeh's (2010) study added that, enhanced leadership and networking skills for first-generation students allows them to grow through exploration and that is critical to their resilience.

First-generation College Students in Higher Education

At first glance into a typical college classroom, one is able to identify male students, female students, students of color, what clothes students are wearing, and even maybe how many backpacks one can see. However, it is not obvious to point out who low-income students are, let alone students who identify as first-generation. Being first-generation is an otherwise invisible identifier until a first-generation student self-identifies. That is why many first-generation students can go unnoticed

throughout their college experience. The following portion of the literature aims to define first-generation students to better understand their experiences related to resilience and persistence in relation to impostor phenomenon.

The appearance of first-generation students in research across the United States has been attributed to the initiation of financial aid programs and other state or federal policies that were intended to create access to education for low-income and historically underrepresented groups (Anderson, 2002). Jamelske (2009) added that first-generation students face unique barriers in higher education programs that affects their ability to graduate. In addition, research has shown that first-generation students are more likely to have lower college retention rates than their non-first-generation peers (Irlbeck et al., 2014). Moreover, first-generation college students are less likely to complete their four-year degree program in the allotted four years of traditional college (Ishitani, 2003).

According to the Cooperative Institutional Research Program's freshman survey data, the proportion of first-generation college students within the overall population of first-time, full-time students entering college as freshmen at 4-year institutions has progressively declined (Higher Education Research Institute, 2007). In 1971, first-generation students represented 39% of all first-time, full-time college freshmen. This number dropped by half by 1992 and by 2005, the proportion of first-generation college students dropped to 16% of all entering freshmen (Saenz, Hurtado, Barrera, Wolf, & Yeung, 2007). In addition, more research suggests that the number of students enrolled in postsecondary education whose parents had not attended

college had continued to decline between 1999-2000 and during the 2011-12 academic year from 37-33% (Staklis & Chen, 2010; Skomsvold, 2015).

First-generation students continue to be the focus of a growing body of research in higher education (Hamm & Gilliard, 2007; Pascarella, Pierson, Wolniak & Terenzini, 2004). The term *first-generation college student* is defined differently across various studies according to Ward, Siegel, and Davenport (2012). Ward et al., (2012) add to various research that defines who first-generation college students are (Horn & Nunez, 2000; Nunez & Cuccaro-Alamin, 1998; Pryor, Hurtado, Saenz, Lindholm, Korn, & Mahoney, 2006; Saenz & Barrera, 2007).

According to Ward et al (2012), the use of the term first-generation students was originally used as an administrative expression to refer to student eligibility for federally funded outreach programs for underrepresented students. Today, the term first-generation refers to students whose parents do not have any postsecondary education or did not go to college at all.

Research has continued to show that students whose parents did not attend college frequently face substantial barriers in accessing postsecondary education, succeeding, remaining enrolled in college and successfully completing their degree (Choy, 2001; Ishitani 2006; Pascarella, Pierson, Wolniak, & Terenzini, 2004, Stephens, Fryberg, Markus, Johnson, & Covarrubias, 2012; Woosley and Shepler, 2011).

The following literature discusses impostor phenomenon among individuals who experience feeling like an impostor.

Impostor Phenomenon

Impostor phenomenon has been defined as internal experience that has been observed to occur in high achieving individuals who do not believe that their achievements are due to their own abilities or hard work (Wilke, 2018). Impostor phenomenon creates deepening feelings of incompetence despite an individual's achievements as well a fear that others will uncover the truth regarding professed intelligence and accomplishments (Langford & Clance, 1993). Hence first-generation students may face a relentless assumption that if found out as frauds, they may lose or not be presented opportunities.

Impostor phenomenon was first identified by Clance and Imes, who asserted that people who experience impostor phenomenon do not see themselves as intelligent or deserving of their accomplishments (Clance & Imes, 1978). As a result, when the "self-imposed standard of achievement" (p. 242) is not met, students with impostor phenomenon may experience anxiety, loss of confidence, depression, or sometimes even drop out of school (Clance & Imes, 1978).

Impostor phenomenon was initially studied among women in the clinical field by Clance & Imes (1978) and has since been studied and observed in other areas, professionals and individuals (Dingman, 1988; Henning, Ey, & Shaw, 1998; Topping, 1983). However, there is limited research that has been done on impostor phenomenon among first-generation college students thus creating a gap in the literature. Although Clance and Imes (1978) originally studied impostor phenomenon among women, other researchers have indicated that impostor phenomenon also exists among men

(Cozzarelli & Major, 1990; Fried-Buchalter, 1992; Kumar & Jagacinski, 2006; Langford & Clance, 1993; Topping & Kimmel, 1985). Impostor phenomenon is situational, occurring in some people when they experience stress or when they are given responsibilities, but not always in others (Clance 1985; Topping & Kimmel, 1985). In addition, some researchers report that individuals who struggle with impostor phenomenon have come to experience more intense negative reactions to failure and register elevated points of anxiety more than individuals who do not experience impostor phenomenon (Cozzarelli & Major, 1990).

Symptoms and Characteristics of Impostor Phenomenon

The commonly cited symptoms and characteristics of impostor phenomenon were anxiety, lack of self-confidence, fear of success and failure, fear of negative evaluation, depression, frustration, and the feeling of being incompetent to achieve individual expectations (Clance & Imes, 1978). Impostor phenomenon begins to manifest when an individual continues to find themselves in a recurrent behavior that underscores their perceived belief that their success is not due to their own capabilities (Clance, Dingman, Reviere, & Stober, 1995). For example, Clance and Imes (1978) described a sample of about 150 high-achieving women who reported the belief that they were really less competent and less intelligent than they looked to be. Clance et al. (1995) reported that these women “attributed their achievements to error and luck rather than to ability and feared they would be discovered in their charade” (p. 80).

Cowman and Ferrari (2002) investigated how shame and guilt play a role in contributing to feelings of impostorism. They added that an individual who

experiences shame becomes isolated and will be preoccupied with negative feelings and an individual experiencing guilt will accept their predicament and will look to others for validation. Cowman and Ferrari (2002) conducted a study with 436 college students and administered the CIPS to investigate “the relationship between impostor tendencies and different behavioral and effective variables” (p.119). Cowman and Ferrari found that impostor tendencies were significantly correlated with behavioral self-handicapping and shame-proneness thus indicating strong impostor tendencies were related to, and best predicted by, self-handicapping behavior and shame prone effect.

The following literature discusses some of the symptoms and characteristics experienced by individuals with impostor phenomenon.

Psychological effects of impostor phenomenon and negative consequences.

According to Wilke (2018), psychological difficulties like anxiety and depression are related to the impostor phenomenon. Langford & Clance (1993)’s study aligned with Wilke’s observation that individuals who struggle with impostor phenomenon fear being “exposed as unworthy and incompetent” (p. 495) therefore triggering symptoms of psychological anguish that can be associated with impostor phenomenon.

Research has uncovered many indicators of psychological suffering related to impostor phenomenon including depression and symptoms such as anxiety related to depression (Chrisman et al., 1995; Clance & Imes, 1978; Ross, Stewart, Mugge, & Fultz, 2001). Research also continued to highlight the occurrence of low self-esteem (Sonnak & Towell, 2001) and the fear of failure or success (Fried-Buchalter, 1992) to

impostor phenomenon in first-generation college students. Chrisman et al. (1995) found that students who experience impostor phenomenon report experiencing depressive symptoms such as guilt, self-criticism and negative thoughts, tendencies that lead to doubting their academic abilities. A study conducted by Henning, Ey, & Shaw (1998) looked at over 400 medical, nursing, dental and pharmacy students and found that feelings of impostor phenomenon and psychological distress symptoms were evident in the studied health professional student demographic.

In another study conducted by McGregor, Gee & Posey (2008), over 180 students who completed the Clance Impostor Phenomenon Scale (Clance & Imes, 1978) showed symptoms related to impostor phenomenon and depression. McGregor et al., (2008) also observed that students who indicated experiencing feelings of impostor phenomenon may not achieve at their fullest potential because of exhibited symptoms of depression. A study by Brown and Dancy (2011), indicated that impostor phenomenon and other psychosocial stress conditions were found among faculty of color and scholars. The study added that faculty of color have been found to mimic impostor phenomenon while associating with administrators, school leaders, and their fellow faculty.

Fear of success and failure. According to Wilke (2018), the fear of success is usually discussed alongside the fear of failure by individuals that experience impostor phenomenon. Wilke notes that although there is not full agreement on whether the fear of success and the fear of failure are two isolated notions (p. 9), it is important for the study to look at success and failure side by side as they both are evident in individuals

experiencing impostor phenomenon due to a concern of being negatively judged or evaluated by others.

Individuals who experience impostor phenomenon are primarily concerned with the evaluation by others. Clance (1985) notes that impostor phenomenon triggers several emotions, such as the fear of failure, fear of success, and guilt about the success obtained. Some of these concerns can be internal, such as fear and concern about how others around the individual will judge them and their performance.

Langford and Clance (1993) posited that individuals who experience impostor phenomenon often place blame on themselves for failures that may occur in their life even if they had nothing to do with the failure or the shortcomings—for example if they take a leave of absence from school due to family hardship like loss of a job for a parent. Additionally, Langford (1990) also presented evidence that showed, that impostor phenomenon shares characteristics with performance goal pattern. Dweck (1986) describes performance goal pattern as performance goal-oriented individuals who continuously seek endorsement and justification from others (like teachers, mentors, and friends) to circumvent negative feedback. Researchers like Kumar and Jagacinski (2006) agreed with Langford (1990) in noting that impostor phenomenon and performance goals are deeply related due to the need for individuals to appear perfect in their work so as not to be judged negatively.

Langford and Clance (1993) added that people with impostor phenomenon who want to be perceived as intelligent are heavily concerned with how others view them and their abilities. Since individuals experiencing impostor phenomenon are

especially concerned with others' opinion of their successes, failures or abilities, anxiety may be a likely outcome for those individuals.

Students who experience impostor phenomenon usually cite a fear of failure. This fear is worsened by the fear of the unknown or of the future, fear of losing friends, and the fear of losing interest in their own work or job (Conroy, Willow, & Metzler, 2002). Moreover, it should be noted that the fear of failure among individuals with impostor phenomenon is likely to be situational and depends on the various concerns experienced by the individual (Sagar & Stoeber, 2009), such as finances to be able to continue school.

Research by Ross et al., (2001) suggested that impostor phenomenon is certainly related to the fear of failure. In addition, research by Fried-Buchalter (1992) concluded that impostor phenomenon, the fear of success, and the fear of failure share a lack of self-confidence among individuals.

Fear of negative evaluation. Individuals who experience impostor phenomenon often show fear of negative evaluation. The need for positive affirmation and approval from others is very important to individuals who struggle with impostor phenomenon. Carlton, McCreary, Norton, & Asmundson (2006) described the fear of negative evaluation as the anxiety and pain that individuals who experience impostor phenomenon face when they think about being judged negatively by others.

Carleton, Collimore, McCabe, and Antony (2011) postulated that the fear of negative evaluation represented a fundamental component of social anxiety and social anxiety disorder. In addition, Chrisman et al. (1995) research suggested that social

anxiety and the fear of negative evaluation by others are the same elementary concepts. Chrisman et al. (1995) then used the Fear of Negative Evaluation Scale by Leary (1983) to examine social anxiety. In their revised version, *The Brief Fear of Negative Evaluation Scale*, Carleton et al. (2006) cited two popular scales used to measure the fear of negative evaluation: The Fear of Negative Scale (FNS) by Watson and Friend (1969) and a second shorter scale, the FNE by Leary (1983). The FNE scale comprises of 30 true–false items, of which 17 are straightforwardly worded “(e.g., “I am afraid people will find fault with me”) and 13 reverse-worded (e.g., “I am unconcerned even if I know people are forming an unfavorable impression of me”)” (Leary, 1983. p. 298). In addition, Leary, Patton, Orlando, & Funk (2000) reported that impostor phenomenon scores are closely related to augmented levels of inspiration in order to avoid negative evaluations by others for individuals experiencing impostor phenomenon. For individuals experiencing impostor phenomenon, it is crucial to remain motivated, focused and continue to be viewed positively by their peers.

Perfectionism. Clance (1985) indicated that the need to be perfect or “the best” highlights yet another characteristic of impostor phenomenon. The need to stand out or be the best is developed from self-inflicted high standards, being hard on oneself, and the relentless need for approval from others (Flett & Hewitt, 2002; Frost, Marten, Lohart, & Rosenblate, 1990; Stoeber & Childs, 2010).

According to Ferrari and Thompson (2006) and Dudau (2014), impostor phenomenon and perfectionism seem to be positively linked. Dudau’s (2014) research

indicated this phenomenon regarding self-evaluation and the need for approval and self-judgment over mistakes made. Research by Henning et al. (1998) showed evidence between perfectionism, impostor phenomenon, and psychological distress further supporting Wilke's (2018) assertion that psychological difficulties like anxiety and depression are related to impostor phenomenon. Furthermore, the Henning et al. (1998) study on perfectionism, impostor phenomenon and psychological adjustment in medical, dental, nursing and pharmacy students supported the notion that high scores on the impostor phenomenon scale is linked to perfectionistic standards.

In an article on the dangers of "feeling like a fake," Kets de Vries (2005) reported that individuals who see themselves as perfect set high and often unrealistic challenging targets for themselves. If these targets or goals are not achieved, individuals with impostor phenomenon will experience added distress, further supporting the research by Wilke (2018) and Henning et al. (1998).

The following literature discusses experiences of first-generation college student in related to resilience and persistence.

Resilience

While it is important to discuss impostor phenomenon as a factor and barrier that makes it difficult for first-generation college students to persist and succeed in college, it is equally important to examine the perceived factors that may help contribute to first-generation student success in college. The following literature discusses the constructs of resilience and persistence as pertaining to first-generation college students.

Resiliency has its origin in the field of developmental psychology (Tusaie & Dyer, 2004). There are various definitions of resilience. According to Masten & Coatsworth (1998), there must be substantial threat to an individual that exposes them to severe hardship and that this hardship is overcome with a positive result in order to indicate resiliency. Research has also posited that resiliency is a process that every individual has the means to experience (Bonnano, 2004; Masten, 2001). Additionally, resilience can vary with context, time, gender, socio-economic status, and even cultural origin (Connor & Davidson, 2003).

The study of student resilience is well documented and studied both in psychology and education (Luthar, 2003; Masten, 2001; Taylor & Wang, 2000). According to Cabrera and Padilla (2004), resilience in education represents students who regardless of economic, cultural, family, or other social barriers still succeed at a higher level (p. 152). They add that when students are able to adapt to their new college setting, that is resiliency.

When college students with a high risk of dropping out, such as first-generation students, adapt to their new environment, they are more likely to achieve success in college (Pizzolato, 2003). Through the examination of various student development theories such as self-authorship by Baxter-Magolda, Pizzolato notes that when students first enter college and continue to navigate college, they move along the self-authorship continuum (p. 798) which allows students to move from feeling unfulfilled to requiring self-definition, a testimony to adaptation or resilience.

To explain the academic and social challenges faced by first-generation students, researchers have focused on three sets of explanations that may impact first-generation student resiliency. First, compared to their non-first-generation peers, first-generation college students have different *pre-college traits*. They have, for example, less knowledge of what to expect in college (York-Anderson & Bowman 1991), weaker high school preparation (Pascarella et al., 2004), and lower academic aspirations (Pike and Kuh, 2005). These factors may result in lower college grades, which may deflate enthusiasm for college attendance and possibly dropping out of college. Various factors indicate and contribute to resilience among first-generation college students as discussed in the subsequent literature.

Motivation. First-generation college students continue to be an “increasingly significant force” or population of students entering higher education (Mitchell, 1997, p. 13). Engle and Tinto (2008) reported that in the past decade, 4.5 million students who identify as first-generation students entered institutions of higher education in America, continuing to indicate the need to conduct more studies on this special and high-risk population. This section highlights the importance of motivation as an element of resilience of first-generation students in the presence of impostor phenomenon.

The National Center for Education Statistics (2019) conducted a national longitudinal study from 1992 to 2000 which indicated that 43% (4 in 10) of first-generation students who entered college left without degree completion (Chen & Carroll, 2005). This finding speaks to the need for motivation for first-generation

students to not only enroll in college, but to stay motivated to complete their degree. First-generation students continue to experience challenges in their pursuance of a college degree (Hsiao, 1992), making the need for motivation ever more crucial. It is also important for institutions of higher education to have a comprehensive understanding of the factors that motivate first-generation students to continue toward degree completion (Hodges-Payne, 2006). The institutions of higher education who are trying to address these issues have their work cut out for them because motivation is intricate, particularly when applied to students like first-generation students who face many hindrances (Wise, 2003).

The application of *Maslow's Hierarchy of Needs* and McClelland's *Need for Achievement* theories are essential for institutions of higher education as they continue to motivate their first-generation students towards degree completion. Tanjula (2014) posited that these "motivation theories can be used to motivate first-generation students intrinsically and extrinsically" (p.134). Examining Maslow and McClelland's theories, a common theme of self-motivation emerges. While Maslow's theory focuses on the five levels humans undergo to achieve success, needing to progress from the lowest to the highest level to achieve this theory is still similar to McClelland's. McClelland's (2001) theory of *Need for Achievement* examines an individual's amplified desire for achievement aligning with Maslow's fourth level of esteem needs which includes of qualities such as confidence, recognition, and freedom which are vital to motivation. Research by Hodges-Payne (2006) supported Maslow and McClelland's assertion about achievement by noting that one significant source of

motivation for first-generation students is self-influence or confidence and the desire for achievement.

Institutional support. Institutional practices which inspire students to get involved on their college campuses have a vast impact on the students' success. As student demographics continue to evolve, it is crucial for institutions of higher education to investigate and understand the factors that are valuable in helping at high-risk student populations such as first-generation students to integrate into the academic and social life on their college campuses (Brewer, 2011). In addition, Pizzolato's (2003) study outlined that institutions of higher education ought to create programs aimed at assisting populations like first-generation students that are at risk of dropping out. Programs created can help first-generation students to integrate and engage in campus life, help with academic issues, navigate mental health concerns, and offer financial aid advising.

Billson and Terry's research (1982) is crucial to developing a seminal understanding of first-generation college students in comparison to second generation and non-first-generation college students. In their often-cited study on first-generation student departure from college, Billson and Terry (1982) argued that institutions of higher education should create policies and programs that help first-generation students in the pursuit of higher education. Billson and Terry (1982) also recommended that assistance to first-generation students can be in the form of reducing the students' financial burden and encouraging on-campus living, which helps to contribute to social life building and campus engagement.

Social life. Tanjula (2014) observed that many students have the desire to be social and to belong within their college environment. McCay and Estrella (2008) reported that first-generation college students are in peril of dropping out of college without connections on campus that create a meaningful social life. Therefore, social and academic amalgamation plays a big role in whether they stay or drop out of college. Students come to college to pursue an education which will lead to employment, but the social component of the college experience is just as vital as the academic one (Martin, 2009).

Hodges-Payne (2006) argued that motivation surges when students become socially engaged on campus therefore igniting a feeling of belonging. Hodges-Payne's (2006) assertion aligned with Tanjula (2014) that students have a desire to be social and find belonging on their college campus.

In addition, Cheng (2004) argued that the quality of students' social life and the feeling of acceptance among their peers helps to contribute to the first-generation students' sense of community, thus contributing to their resilience. Cheng's (2004) study further found that when students feel cared for by members of their community, this contributes to a positive impact on the way students perceive themselves, thus contributing to student resilience.

Persistence

The National Student Clearinghouse Research Center (2019) defines persistence as the percentage of students who return to college at any institution any given term year-to-year. For the purpose of this study, persistence examines first-generation students who return to any institution year-to-year, from their first year of enrollment through commencement. When it comes to persisting, being a first-generation college student comes with challenges and hindrances toward achieving academic success and eventually college completion (Hsiao, 1992; Lee, Sax, Kim, & Hagedorn, 2004). First-generation students continue to be at risk of not persisting or completing their degree due to being less academically prepared and often having to work full-time while enrolled (Chen & Carroll, 2005; Horn & Premo, 1995; Mangan, 2015; Nunez & Cuccaro-Alamin, 1998).

The exploration of the first-generation student persistence is vital because, according to a longitudinal study by the National Center for Education Statistics conducted from 1992 to 2000, 43% (4 in 10) of first-generation students enrolled at institutions of higher education leave without obtaining their degree (Chen & Carroll, 2005). Therefore, understanding the factors that motivate first-generation students toward persistence is vital (Hodges-Payne, 2006). It should also be considered that helping students like first-generation students who experience unique challenges and barriers is hard because of the unique challenges they face such as limited pre-college preparedness and increased distress on how to navigate college (Wise, 2003). According to Stoecke, Pascarella, and Wolfle (1988), the most important factors of

persistence are the students' academic engagement at the institution, as the following preliminary literature review discusses.

Campus engagement. First-generation college students continue to have lower retention and graduation rates than their non-first-generation peers (Woosley and Shepler, 2011), adding to the observation that the persistence of first-generation students can be affected by feeble early engagement and weaker continuous integration and engagement into campus life (Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996; Tinto 1993).

Part of being able to persist towards graduation is student engagement on campus. However, for some first-generation students, lower rates of campus involvement and engagement have been noted (Astin, 1993; Pike & Kuh, 2005). In addition, first-generation students are less likely to persist from their first year to their senior year, compared to non-first-generation peers if not fully engaged in their campus communities (Choy, 2001; Davis, 2010). Tinto (1993) observed that students fail to become integrated when they experience a sense of incongruence with the social or academic climate of the campus since incongruence is often linked to feelings of isolation, or a lack of desire to form more frequent, intense bonds with members of the campus community.

Research showed that first-generation students experience higher risks of dropping out of college compared to non-first-generation students (Billson & Terry, 1982; Ishitani, 2003; Pike & Kuh, 2005; Terenzini et al., 1996). To address the elevated high risks of first-generation student not persisting on with their education,

studies presented the use of initial college engagement and involvement can be vital (Woosley & Miller, 2009; Woosley, 2003). When students feel included and are involved in the campus life of their institution, they are more likely to persist to degree completion. Additionally, research by Hurtado and Carter (1997) posited that a sense of belonging and a welcoming community goes a long way to ensure that first-generation students feel welcome and part of their community. The ability to have and engage in outside of the classroom activities, such as co-curricular activities helps in the persistence of first-generation students (Johnson, Soldner, Leonard, Alvarez, Inkelas, Rowan-Kenyon, & Longerbeam, 2007; Summers & Volet, 2008).

Mental health. Mental health has been described by the World Health Organization (2013) to be the result of personal features (such as the ability to manage emotions in addition to biological, social, economic, and environmental factors). Examining mental health for first-generation student persistence is essential because being the first in one's family to attend college away from home and an established support system may lead to emotional reactions such as stress and anxiety. Stress continues to be the leading factor negatively affecting academic performance of students (American College Health Association, 2008). Furthermore, Eisenberg, Downs, Golberstein, and Zivin (2009) reported that depression (a symptom of mental health concerns) predicts the lack of persistence in college for students.

Mental health concerns, such as stress, depression, anxiety, and suicidal ideation are rampant among college students. In a study conducted by Eisenberg, Hunt, and Speer (2013) found that among the 14,175 surveyed students, 50% reported

having symptoms relating to mental health concerns, such as depression, panic disorders, anxiety, suicidal ideation, and nonsuicidal self-injury. According to Clark (2017), mental health is an important social distinction that continues to impact the experiences of students on college and university campuses. The American College Health Association's (2008) National College Health assessment survey conducted in 2007, found that stress was the leading factor affecting the academic performance of students. If a student is not able to excel academically, chances of not persisting go up. This observation is supported by a national longitudinal study by Mojtabai, Stuart, Hwang, Eaton, Sampson, and Kessler (2015) that revealed students who struggle with mental health have slim chances of completing high school, which in return affects their chances of going to and graduating from college.

Clark (2017) added that identity stressors are experienced mostly among minority student groups and include but not limited to being first-generation, sexual orientation, or even a racially tense campus environment. Research from Byrd and McKinney (2012) reported that how someone identifies (race, gender, or sexuality) can lead to stressors such as depression and anxiety especially for students in higher education, thus leading to college drop out.

Parents/family involvement. Parents' experiences with college are vital to the shaping of their expectations for their children, and the lack of direct parental or family experience with higher education can be a barrier for students who are first in their family to attend college (Brown, 1997). According to Choy (2001), lower educational expectations contribute directly to the lower post-secondary enrollment

rates for students whose parents did not attend college. Nunez and Cuccaro-Alamin (1998) argued that as parental education rises, so does the likelihood of their children to attain a college degree or remain enrolled.

Students whose parents have no college background experience a disadvantage when applying or attending college compared to their non-first-generation college peers. According to Tinto (1993), college adjustment for the first-generation students is particularly difficult. The hardship can be attributed to not having anyone to talk to the first-generation student about college applications, financial aid applications and even how to navigate college upon arrival on college campus. First-generation students do not benefit from their parents' college experience because it does not exist which causes a lack of valuable cultural capital such as "advice about how to use office hours" that helps student navigate college (Collier & Morgan, 2008, p. 435). Martinez, Sher, Krull, and Wood (2009)'s research on the mechanisms of attrition concluded that minimal parental education was a contributing risk for student attrition due to lack of role models that have attended and graduated from college.

Family involvement is essential in the education of underserved students such as first-generation college students. However, this involvement can be hindered by limited resources such as finances, time, confidence, and language skills (Tym, McMillion, Barone, & Webster (2004). Finances play a huge role in college attrition of high-risk students like first-generation college students. In their quantitative study, Somers, Woodhouse, and Cofer (2004) reported that numerous factors contribute to dropping out of first-generation students. These factors include but are also not limited

to worries about the college experience, finances, and the possibility of enormous debt. The study also finds that low-income and multiethnic first-generation students are less likely to persist due to financial constraints or the burden of the student loan debt.

Students whose parents do not have a college degree continue to be one of the most-frequently targeted populations, along with minorities and low-income students, for outreach programs designed to assist with college preparation, readiness for post-secondary work, and college affordability (Swail & Perna, 2000).

Academic preparation. Many studies have concluded that first-generation students come to college less academically prepared and as a result are unable to achieve higher academic successes compared to their non-first-generation college peers (Chaney, Muraskin, Cahalan, & Goodwin, 1998; Hsaio, 1992; York-Anderson & Bowman, 1991). In most cases, first-generation students have not had the opportunity to attend college preparation classes, let alone practice and take college entrance exams like the SAT or ACT (Warburton, Burgarin, Nunez, & Carroll, 2001).

Warburton et al. (2001) added that first-generation students who attended good high schools and had a strong high school background showed little difference from their non-first-generation peers. This observation supports the notion that lack of college preparation for most first-generation students results in low academic achievement in college. Usually, some college scholarships and grants are awarded according to SAT and ACT scores. A first-generation student who did not take or obtain a high score on

the college entrance exam, they may not receive additional financial aid or grants, thus making affording college another challenge for first-generation students.

Furthermore, first-generation students are more likely to have lower grades during their first semester in college due to little or no college preparation (Riehl, 1994) and lower first-year grade point averages compared to their non-first-generation peers (Warburton et al., 2001).

First-generation college students continue to be at-risk of being academically, socially, and economically behind their non-first-generation peers regardless of same or equal academic achievements (Pascarella, Pierson, Wolniak, & Terenzini, 2004). Pascarella et al. (2004)'s observation stems from a study by Terenzini et al. (1996) which showed no difference between first-generation and non-first-generation students in critical thinking and mathematics. Nevertheless, the study shows that first-generation students struggled with reading conception compared to their non-first-generation peers.

Academic integration. Academic integration has been defined as a formal and informal collaboration with the academic structures of a college, including staff, faculty, in and outside of class activities (Rendon, Jalomo, & Nora, 2000).

According to Nettles (1991), academic integration involves student fulfillment with their faculty and staff relations, the feeling that their faculty are attentive to their needs and ambitions to be successful students, the comfort students feel they can develop and maintain personal relationships with the faculty, and the satisfaction of the quality of education at the university (p. 90). Nettles' observations are helpful for

institutions as they continue to welcome and support first-generation students. The more institutions are prepared to welcome first-generation students and cater to their academic needs and integration, the more likely to persist on to graduation.

Tinto (1993) observed that when students start to feel bored with their academics or feel that their intellectual side is not being challenged enough, this lack of engagement may lead to students dropping out of school. The loss of interest is what Tinto's earlier research (1987) refers to as academic incongruence. Academic incongruence is when the student feels that their academic needs do not match those provided and available at the institution which would also include relationships and connections with staff and faculty. Tinto (1993) further stated that interactions with staff and faculty may not be enough or offer positive support needed by the students to want to continue at the institution. However, while contact with staff and faculty will not guarantee persistence of the students, "the absence of the interaction contributes to the likelihood of departure" (Tinto, 1993, p. 117).

Terenzini et al. (1996) observed that first-generation students are less likely to be involved in academic workshops and their faculty may not be aware or be concerned with their absence. In addition, for first-generation college students that attend large institutions, large class sizes, and a lack of faculty interaction leads to a high risk of dropping out for first-generation students who may already be less academically prepared for college to succeed and manage any academic challenges (Richardson & Skinner, 1992).

Advising, support, & mentors on college campuses. Approximately 43% of all first-year college students identify as first in their families to seek a college education (Chen & Carroll, 2005; Choy, 2001). Despite composing a large percentage of students entering college, first-generation students do not graduate at the same rate as their peers who have at least one parent who attended college (National Center for Educational Statistics, 2019). Compared to students with college-educated parents, first-generation college students report receiving less assistance in preparing for the postsecondary environment (Choy, 2001).

College students, especially first-generation students who struggle with impostor phenomenon can still be successful in college. They can engage in campus life, seek mentors in their staff or faculty members. By doing so, first-generation students can strengthen their morale and feel less than impostors (Knights & Clark, 2013), consequently enabling them to accomplish their academic goals to degree completion.

In addition, Brewer (2011) stated that first-generation college students tend to be academically underprepared for the academic life of college compared to their non-first-generation peers. Therefore, having a mentorship program or academic help centers on campus to assist in the navigation of academic life is vital to the persistence of first-generation students.

College students, especially first-generation students, often seek out mentors and positive role models on their college campuses to help them overcome or deal with impostor phenomenon (Megginson, 2016). Some mentors may have been first-

generation students themselves in college and would offer great insight into ways of navigating feeling like an impostor. Students who feel like impostors need encouragement and reminders that they are not alone in feeling alone and not belonging, hence the importance of mentors who themselves have once been first-generation students or experienced impostor phenomenon.

Faculty members play a significant role in the academic success of first-generation students. Faculty members' help comes in the form of out-of-the-classroom connections around advising, and academic support offered to the students (Kuh, 2003; Wirt & Jaeger, 2014). Research also observes that when faculty interacts on a more direct basis with the first-generation students in and out of the classroom, this contact strengthens student development and learning (Kim & Sax, 2009). When first-generation students are able to engage with their professors on low-stakes topics and get feedback on assignments and grades, other conversations like career plans can be more comfortably addressed later on.

Research showed that when faculty members meet and interact with the students outside of the classroom, there is an increase in student retention which correlates with student persistence by approximately 13% each meeting (Swecker, Fifolt, & Searby, 2013). However, first-generation students show less interaction with their faculty in and out of the classroom compared to their non-first-generation peers (Soria & Stebleton, 2012). It is therefore important for faculty members and other campus staff to make intentional outreach to first-generation students.

Gaps in Existing Literature

There is a gap in the literature around the tracking of the initial first-generation students in college, as it was not until the 1970s that the mention of first-generation students as a student group starts to show up in research and literature.

Although a great deal of research has been conducted regarding first-generation college students, none was found that addresses the successful first-generation students. There is a gap in longitudinal studies that follow first-generation students' post-graduation to ask this high-risk population what programs or services directly helped them succeed.

In addition, research on first-generation students has thoroughly examined their early integration by measuring the lower rates of persistence among minority groups (Planty, Kena, & Hannes, 2009). However, limited research has been conducted to examine the differences among students regarding mental health and their integration or engagement on campus.

Summary of the Literature

The literature examined in this paper provides a preliminary overview of impostor phenomenon and how persistence and resilience experiences are related to first-generation college students during their time in college. The research adds to the study of first-generation students' experiences with impostor phenomenon and the perceived experiences of persistence and resilience that contribute to degree completion. Research has shown that first-generation students are more likely than their non-first-generation peers to drop out of college before or after their first year.

(Choy, 2001; Ishitani, 2006; Pascarella et al, 2004). In addition, research shows that parental or family involvement plays a crucial role in the persistence of first-generation students. Moreover, the research has indicated the contribution of institutional support in the support and success of first-generation students.

The literature also explored how impostor phenomenon may manifest in students who identity as first-generation, as well as the role mental health plays in their persistence. Furthermore, the literature discussed the role of campus engagement in first-generation student persistence, in addition to academic preparation and academic integration. The literature also highlighted the important role mentors and advisors play in the persistence of first-generation students.

Chapter 3: Methodology

This chapter presents the methodology that was used to conduct this mixed methods study. The purpose of the study, research questions, instrumentation, participation, data collection, and analysis are outlined to establish the quantitative and qualitative methods that were used in the study. The purpose of this mixed methods study was to explore the lived experiences of first-generation college seniors to understand the presence of impostor phenomenon during their college journey. The study sought to understand how impostor phenomenon manifests among first-generation students. In addition, this study examined how perceived experiences of resilience and persistence among first-generation students that helped the students on their journey to graduation.

Purpose of Study and Research Questions

The purpose of this mixed methods study was to explore the lived experiences of first-generation college seniors to understand the presence of impostor phenomenon during their college journey. The ultimate goal of this study was to uncover the presence of impostor phenomenon among first-generation college seniors and how their perceived experiences of resilience and persistence have helped them achieve academic success in the presence of impostorism. The research questions explored in this study included:

1. Do first-generation students experience impostor phenomenon during their journey to graduation?
2. If experienced, in what ways do students experience impostor phenomenon?

- 2b. How do students describe experiences of impostor phenomenon?
3. What perceived factors contribute to the resilience and persistence of first-generation students on the journey to graduation?

Research Design and Rationale for Methodology

A mixed methods descriptive approach was chosen to help address the research questions in this study. By using mixed methods, the researcher was able to combine both quantitative and qualitative approaches to better “understand a phenomenon fully than is possible using either quantitative or qualitative approaches alone” (Mills & Gay, 2016, p. 8). In addition, mixed methods was used because Creswell (2015) argues that:

As an approach to research in the social, behavioral, and health sciences in which the investigator gathers both quantitative (close-ended) and qualitative (open-ended) data, integrates the two and then draws interpretations based on the combined strengths of both sets of data to understand research problems.
(p. 2)

A descriptive cross-sectional survey design allowed for the measurement of impostor phenomenon among the first-generation college seniors by examining the disaggregated demographics, as well as the how and why the first-generation students feel like impostors. The quantitative survey items allowed for the researcher to gather demographic data and run analyses of descriptive statistics and comparison of means across the demographics, from the participants’ responses on the Clance Impostor Phenomenon Scale (CIPS), the Connor-Davison Resilience Scale (CD-RICS-25), and

on the Grit scale. Open-ended items allowed for the collection of qualitative data from the participants about their lived experiences of impostor phenomenon. Participant responses on the three scales allowed the researcher to identify trends that surfaced, and the phase two interview questions helped elaborate and gather evidence of lived experiences of impostor phenomenon among the first-generation college seniors. The CIPS is a measuring scale (Clance, 1985) helps to identify traits of impostorism through exposure of the participants' insecurities and feelings of fraudulence. Clance developed the scale to lessen social desirability effects and to boost feelings of inclusivity and confidence among the respondents to the scale (Holmes, Kertay, Adamson, Holland, & Clance, 1993).

Specifically, this study applied what Creswell (2015) referred to as the explanatory sequential design, first consisting of quantitative data collection and analysis and then qualitative analysis. Findings from the quantitative phase were used in the data collection, analysis, and interpretation of the qualitative data obtained through student interviews. One of the strengths of the explanatory sequential design is that the researcher is able to use qualitative findings to elaborate on or explain the quantitative findings (Mills & Gay, 2016). The flowchart in Figure 2 shows the study's design.

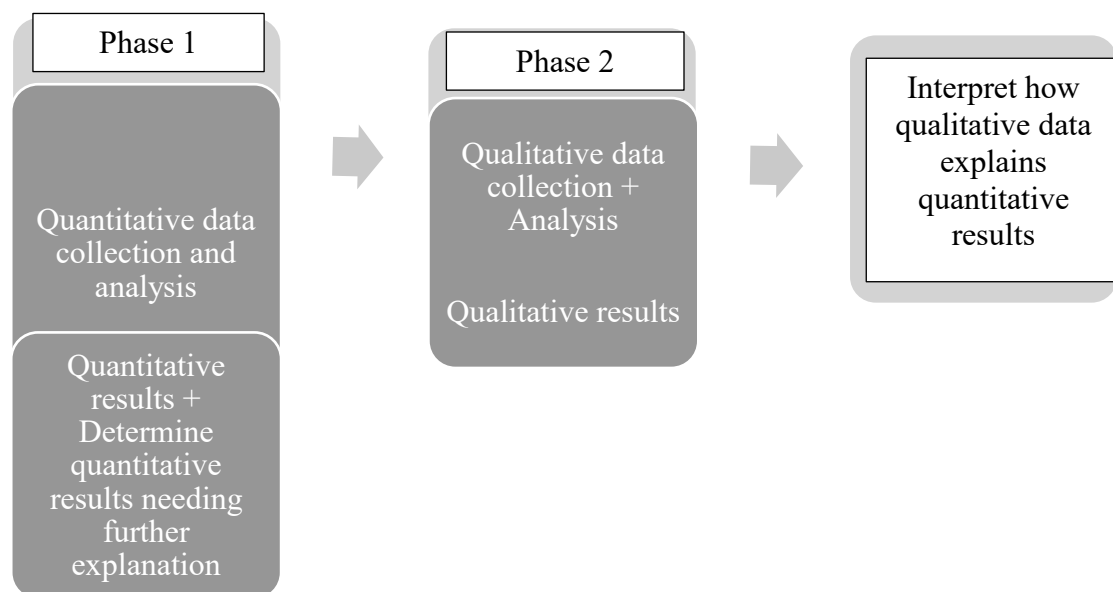


Figure 2. Flowchart illustrating the Explanatory Sequential Design of Mixed Methods Research. Adapted and modified from Creswell (2013).

Participants and Context

The participants in this study were first-generation college students in their senior year attending a 4-year institution. Participants were invited to participate in the study through email. Students from approximately 77 4-year, First-Gen Forward institutions were contacted and 51 self-identifying first-generation seniors completed the survey and were included in the study. According to the Center for First-generation Student Success, First-Gen Forward is a recognition program for higher education institutions that are committed to first-generation student success.

On April 8, 2020, the researcher conducted a phone conversation with Deane Waintraub Stafford, the Assistant Director at the Center for First-generation Student

Success at NASPA-Student Affairs Administrators in Higher Education in Washington, DC to request a survey be sent to the students attending the First-Gen Forward institutions. As the gatekeeper to the students, Stafford agreed and asked that the final survey be emailed to her and she would send it out to the students in the member institutions of the First-Gen Forward program. In addition, the survey was shared on various first-generation college student social media platforms to increase the diversity and number of responses. The survey included a request to the participants to provide their email address and phone number if they would like to be interviewed to further share their experiences in depth. Tables 1 and 2 display the study participant demographics. Table 1 shows the participant numbers by gender, race categories, and age.

Table 1*Participant Demographics*

Category	<i>n</i>	%
Gender		
Male	14	27.5
Female	35	68.6
Non-binary	1	2.0
Prefer not to say	1	2.0
Total	51	100
Race		
Asian/Asian-American	12	23.5
Asian/Asian-American, Other	1	2.0
Asian/Asian-American, Pacific Islander	1	2.0
Black/African-American	2	3.9
Hispanic/Latino	9	17.6
Multi-Racial	1	2.0
Other	1	2.0
Pacific Islander	1	2.0
White	19	37.3
White, Asian/Asian-American	1	2.0
White, Hispanic/Latino	2	3.9
White, Other	1	2.0
Total	51	100
Race, 3-categories		
White	23	45.1
Asian	15	29.4
Other	13	25.5
Total	51	100
Age		
24 and older	5	9.8
Younger than 23	46	90.2
Total	51	100

Table 2 shows the participant majors or areas of degree study.

Table 2*Participant Majors*

Major	<i>n</i>	%
B.A. Psychology	1	2.0
BBA OTM & Finance	2	4.0
Biochemistry	3	5.9
Biology	4	7.8
Biology & Chemistry (double major)	1	2.0
Biology & German	1	2.0
Business/Business Marketing	2	4.0
Chemistry/Biochemistry	1	2.0
Child Development & Law, History, and Society	1	2.0
Communication/Sociology	1	2.0
Computer Science	1	2.0
Education	1	2.0
Electrical Engineering	1	2.0
English	1	2.0
Environmental Ethics & Policy	1	2.0
Finance	1	2.0
IHW	1	2.0
Liberal Arts	1	2.0
Marketing	1	2.0
Mathematics	1	2.0
Mechanical Engineering	4	7.8
Nursing	1	2.0
Nursing	7	13.7
Nursing RN-BSN program	1	2.0
OTM & Finance	1	2.0
Political Science, International Relations & Spanish	2	4.0
Pre-Med Bio	1	2.0
Psychology	2	3.9
Public Safety Administration	1	2.0
Social Work & Integrative Health	2	4.0
Social Work, Minor in Communications	1	2.0
Theater Design & Theater Management	1	2.0
Total	51	100.0

Instrumentation

Two different instruments were used at various phases in the investigation. First, a Qualtrics cross sectional survey was sent out to first-generation student seniors attending a 4-year First-Gen Forward institution and to all first-generation seniors on social media platforms attracting first-generation students. One of the social media pages the survey was shared on is the Facebook page entitled *Empowering First-generation Students Group*. Second, based on the willingness of those respondents, six interview participants were considered, in order to move deeper into investigating the problem.

Survey

Three scales were included in the survey. The Clance Impostor Phenomenon Scale (CIPS), the Connor-Davidson Resilience Scale (CD-RISC-25), and the Grit Scale were used for the study to capture participant's responses to impostor phenomenon, resilience and grit (persistence). The scales were combined into a single survey with the addition of demographic questions asking participants for their email contact information; major; race/ethnicity; gender; the institutional type of their college or university; and if they were the family in their family to attend college (the complete survey can be found in Appendix E.)

Clance Impostor Phenomenon Scale (CIPS). The CIPS is a prominently used test in research and by psychologists. Clance (1985) developed the test to help individuals determine whether or not they have impostor phenomenon symptoms or characteristics and, if so, to what extent. The CIPS quantitative questionnaire relies on

a 100-point scale and is administered using a 20-item Likert-style questions varying from 1—statement is not at all true to 5—statement is very true). According to Clance, if a participant's total score is 40 or lower, the participant has little impostor characteristics. A score between 41-60 means the participant has moderate impostor phenomenon experiences, a score between 61-80 means frequently experiences impostorism. Finally, a score higher than 80 will indicate intense feelings of impostorism (Clance, 1985). Table 3 shows the survey participant demographics and descriptive statistics related to gender and race.

Table 3

Clance Impostor Phenomenon Scale Participant Demographics

CIPS	<i>n</i>	Mean	<i>SD</i>	Min	Max
Total	45	72.4	14.6	40	100
Gender					
Female	29	77.4	11.7	56	94
Male	14	63.4	15.6	40	100
Race					
White	20	73.4	13.3	52	100
Asian	13	69.5	14.6	49	93
Other	12	73.8	17.2	32	40

The Connor-Davidson Resilience Scale (CD-RISC-25). This resilience measuring scale was used in the survey contains 25-items used to measure resilience as shown in Appendix E. The CD-RISC-25 consists of statements describing different aspects of resilience such as adaptability, optimism and self-efficacy. Items in the scale range from 0-not true at all, 1-rarely true, 2-sometimes true, 3-often true to 4-true nearly all the time. A total score of the participants was obtained by adding up all the

25 items, which should yield a score between 0-100. The lower the score, means the participant has less resilience and the higher the score, indicated greater resilience.

The researcher reached out to Dr. Davidson via email and received permission to use the CD-RISC-25 scale for this study. Table 4 depicts the survey participant demographics for the Connor-Davidson Resilience Scale segregated by gender and race.

Table 4

Connor-Davidson Resilience Scale Participant Demographics

Resilience Scale	<i>n</i>	Mean	<i>SD</i>	Min	Max
Total	49	68.7	14.5	37	100
Gender					
Female	34	67.2	14.2	37	97
Male	14	72.5	15.4	46	100
Race					
White	22	69.1	14.5	50	100
Asian	15	67.3	16.5	37	97
Other	12	69.6	69.6	50	94

The Grit Scale. The 12- item Grit scale by Dr. Angela Duckworth was chosen to be used for this study because it was the closest scale to help measure persistence among the first-generation college student participants and it was available for use (Duckworth, Peterson, Matthews, & Kelly, 2007). To determine the participant's Grit (persistence), the researcher followed the scoring guide provided by Dr. Duckworth. Questions 1, 4, 6, 9, 10 and 12 are assigned the following points: 5 = Very much like me, 4 = Mostly like me, 3 = Somewhat like me, 2 = Not much like me, and 1 = Not like me at all. For questions 2, 3, 5, 7, 8 and 11, the participants were assigned the

following points: 1 = Very much like me, 2 = Mostly like me, 3 = Somewhat like me, 4 = Not much like me, and 5 = Not like me at all. Each participant's points are all added up and divided by 12. The maximum score on the Grit scale is 5 = extremely gritty and the lowest score on the scale is 1 = not at all gritty. Table 5 shows the survey participant demographics for the Grit Scale separated by gender and race.

Table 5

Grit Scale Participant Demographics

Grit Scale	<i>n</i>	Mean	<i>SD</i>	Min	Max
Total	50	40.5	7.1	21	55
Gender					
Female	34	39.8	7.8	21	55
Male	14	41.6	5.7	29	49
Race					
White	23	39.7	7.3	28	55
Asian	14	40.4	7.9	21	49
Other	13	41.9	6.4	32	52

Survey Sampling. Once the survey closed, the researcher screened the responses for those who fully completed the scales along with the demographic questions. Participants who completely responded to the survey were invited by email to participate in an interview. The interviews were planned and took thirty minutes for each participant.

Homogenous sampling. According to Creswell (2015), a homogenous sample is one in which “the researcher purposefully samples individuals or sites based on membership in a subgroup that has defining characteristics” (p. 207). In the case of this study, students who identified as first-generation seniors completed the three

scales and indicated that they would like to be interviewed qualified to be included in the study. All quantitative data was collected via the University of Portland Qualtrics software form that the researcher and chair had access to, to ensure safe-keeping and confidentiality of the participants.

Purposeful sampling. Purposeful sampling engages deliberate choosing that can “purposefully inform an understanding of the research problem and central phenomenon in the study” (Creswell & Poth, 2018, p. 158). First-generation college seniors have first-hand experiences and knowledge of the problem, and perspectives regarding the research questions, which is the ultimate goal of purposeful sampling (Merriam & Tisdell, 2016).

Interviews. During the second phase of the study, open-ended questions were asked during less-structured interviews with the participants. By designing and asking open-ended questions, the researcher was able to ask follow-up questions (Wilkinson & Birmingham, 2003). Six open-ended questions were asked to help provide an authentic and elaborate narrative of the experiences of the first-generation students and their familiarity with impostor phenomenon. In qualitative studies, interviews tend to be more open-ended and less structured. According to Merriam and Tisdell (2016), “Less structured formats assume that individual respondents define the world in unique ways” (p. 110).

The researcher utilized *Calendly* and *Zoom* to schedule the interviews with the selected participants. Participants were interviewed in one, one-on-one interview that

was scheduled for 30-minutes to ensure confidentiality and ease in sharing of participants experiences. Interview questions that were utilized included:

1. You are the first person in your family to go to college. Can you tell me a little bit about what that means to you?
2. Using one word, describe/sum up your experience at your college/university.
Follow up question: Please explain why you chose this word.
3. Impostor phenomenon has been defined as an Individual's feelings of not being as capable or adequate as others may perceive or evaluate them to be. Symptoms include feelings of phoniness and self-doubt. Are you familiar with impostor phenomenon?

Follow up question: How would you describe impostor phenomenon in your experience?
4. How often did you feel like an impostor in college?

Follow up question: How did you deal with that situation?
 - Probe for academic experiences of feeling like an impostor: How have you coped to reach senior year?

Example: if student still needs a probe or example to highlight when they felt like an impostor and how you overcame those feelings.
 - Probe for social/cultural experiences of feelings like an impostor. How have you coped to reach senior year?
5. What advice would you offer your freshman year self on overcoming impostor phenomenon as a first-generation college student?

Follow up question: What factors have contributed to your resilience and persistence from first year to senior year?

6. What other advice would you offer other individuals such as:

- I. Parents
- II. Professors
- III. College staff (financial aid officers, academic advisors etc.)

End with: Is there anything else I need to know about impostor phenomenon and your experiences that I did not ask?

A copy of the interview questions, directions, and protocols can also be found in Appendix H.

Interview sampling. When survey responses concluded, the researcher first reviewed and identified all those that indicated interest in the interview. Out of the 51 responses who met the sampling criteria, 21 indicated interest in interviewing.

Purposeful sampling was utilized to determine the 6 interview participants.

Purposeful sampling. The researcher applied purposeful sampling to determine qualified cases, with the possibility to provide more detail and share their experiences. Qualified cases included the 2 only male participants that indicated interest in being interviewed and actually signed up for an interview, at least a participant from each of the major ethnic grouping, and varying academic majors. Out of the 10 participants that signed up for the interviews, 6 were selected as the final interviews used for the study.

Data Collection and Design and Procedure

The explanatory sequential design of this study included multiple methods of data collection. In the first quantitative phase, explanatory and survey data was used to provide a general picture of the research questions. The second qualitative phase included interviews of selected participants to help refine, develop, and or help explain the general responses from phase one (Creswell & Plano Clark, 2011).

Phase one. Upon the successful defense of the dissertation proposal on July 28, 2020, the researcher submitted and obtained IRB approval on September 4, 2020. Appendix A consists of the IRB approval. Following IRB approval, the researcher emailed the survey to the gatekeeper for dissemination to the participants in addition to sharing the survey to various social media platforms and first-generation student groups to bolster a wide and diverse response rate. Phase one data collection began within the time frame when most institutions around the country reopened for the fall semester. Due to the COVID-19 pandemic, most institutions of higher education in the United States commenced their fall semester or first quarter earlier in the fall, around early-to-mid August. The researcher aimed to complete the survey data collection and conduct interviews for phase two before Thanksgiving break. This tight scheduled ensured that all necessary data was collected before the students got busy with finals and the end of the semester/quarter. Since the survey was designed and sent out using Qualtrics, the researcher was able to keep track of how many participants had responded to the survey. In addition, data from the Qualtrics survey was easily sanitized in Excel and exported to SPSS for analysis. Two weeks after the first email

and survey post went out to the participants, the researcher sent another reminder email and reposted the survey, encouraging participants to take a moment to complete the survey.

Phase two. The results from phase one helped inform the researcher of extra details for the next steps needed in the second phase, which is qualitative. First-generation college seniors who completed the survey and indicated that they would like to be interviewed were invited to be interviewed in order to learn more about their experiences with impostor phenomenon and experiences of resilience and persistence. Semi-structured interviews were conducted with the selected participants. The criteria for selecting the participants for the second phase, the qualitative interviews included: Participants that had fully completed the survey, indicated that they would like to be interviewed. The interview data was coded and analyzed to present a more in-depth student experience than what was presented in phase one. According to Creswell (2015), the mixed methods approach allows for the merging, connecting, building and embedding of both the quantitative and qualitative data. By following Creswell's idea, the researcher was able to merge the participants' CIPS, CD-RISC-25, and Grit scale responses with the narratives from the interviews thus connecting the two by building on the emerging themes, and finally embedding the lived experiences of the first-generation college seniors to emphasize their experiences with impostor phenomenon.

Pilot. The researcher conducted a pilot of the interview questions. The researcher solicited the help of her cohort members to pilot the interview questions. By piloting the interview questions, it ensured that questions were clear, no typos, and

confirmed that the questions were asking what the researcher intended to ask of the participants.

Role and Positionality of the Researcher

The researcher is a first-generation college student, was an international student for twelve years, and has worked in higher education, student affairs for close to seven years now. The last seven years have been spent working with students in three different institutions of higher education in two states. During the greater part of this study, the role of the researcher was a Residence Hall Director at a liberal arts institution in the Pacific Northwest and currently teaches middle school. The researcher has worn multiple hats in her role as hall staff, serving a wide array of students in two predominately white institutions, private liberal arts and church affiliated institutions, first in the Midwest and currently in the Pacific Northwest and a mid-sized state university in the Midwest. Working at these three different institutions has brought the researcher in contact with students from low to mid-to high-socioeconomic statuses, international students, first-generation college students and students of color. As a first-generation college student, the researcher was aware of her bias going into the study and acknowledged the checks and balances that must be adhered to in order to conduct a credible and dependable study. The researcher conducted member checks with the participants to ensure their narratives were well represented and not the researcher's thoughts or prior experiences.

Ethical Considerations

On April 8, 2020 the researcher conducted a phone conversation with Deane Waintraub Stafford, the Assistant Director, at the Center for First-generation Student Success at NASPA-Student Affairs Administrators in Higher Education in Washington, DC to request a survey be sent to the students. As the gatekeeper to the participants, Stafford agreed and asked that the final survey be emailed to her and she would send it out to the students in the member institutions of the First-Gen Forward program. Upon IRB approval, the researcher emailed out the survey to the participants, in addition to sharing it on social media platforms and groups targeted to first-generation college students. The researcher stored all data related to the study on a password protected personal computer, backed up on the researcher's institution's server, and protected under password. In addition, the researcher at the beginning of each interview asked each participant for verbal permission to record the interview in Zoom. Participants have been given pseudonym names (Creswell & Poth, 2018, p. 151) to protect their identities and that of their institutions. In addition, final reporting and presentation of this study's findings, including the student survey responses, interview responses, and any other data has been and will continue to be kept confidential and coded to be unrecognizable to anyone but the researcher.

No humans were harmed during this study. The study design minimized risks through privacy, asking for permission, and confidentiality. Participation in this study was completely voluntary. A letter was provided to the potential participants,

informing them of consent, privacy, and confidentiality. Furthermore, all participants were notified of their right to withdraw from participation at any time without penalty.

Data Analysis

The data collected in this study consisted of survey feedback and interview responses which helped the researcher to address the research questions (Creswell & Poth, 2018). The information collected was examined to see if any consistent themes related to impostor phenomenon and the experiences of resilience and persistence among first-generation college seniors emerged.

Survey data. There were 56 survey items on the survey related to the three scales used in the study and 10 categorized as demographic or quantifiable data. The demographic items and quantitative data were analyzed using descriptive statistics, frequencies, and cross tabulation. Cross tabulation examined relationships within the data for what was expected to happen and what actually happened. Statistical significance was evaluated with a criteria of $p < .05$.

Interview data. The qualitative data from the interviews were analyzed and coded using Word and Dedoose Software. The researcher engaged in note taking during the interviews, in addition to recording the interviews using Zoom and REV. The interviewed were transcribed using the REV software to ensure accuracy. Upon completion of the interviews, the researcher aimed to identify themes and record them for Chapter 4 data findings. The process of setting themes aside served as a count to see how many and what kind of themes emerged. According to Creswell (2013), the process in which the researcher sets the themes aside, helps to highlight significant

statements, phrases, quotes, sayings, and sentences that helped highlight the participant's experience with impostor phenomenon. Furthermore, the researcher utilized analytic memo writing which Saldaña (2009) refers to as “documenting and reflecting on: your coding process and code choices; how the process of inquiry is taking shape; and the emergent patterns, categories and subcategories, themes, and concepts in the data” (p. 41). To identify the final themes, the process of coding was initiated.

First cycle coding. According to Saldaña (2016), first cycle coding is the process of initially coding the data. In Vivo Coding was used as the first cycle coding method in order to highlight and honor the participants' voices. In Vivo means *in that which is alive* and documents actual words or short phrases from the interviews/qualitative data (Saldaña, 2016). Using this form of coding helped identify the specific words first-generation college students used to narrate their experiences related to impostor phenomenon, resilience, and persistence. Coding as a *splitter*, almost every line of data transferred into its own initial code. Then each code was cut and pasted into clusters of similar meaning (Saldaña, 2016). For example, the researcher recorded, “I always feel like I’m always self-doubting,” as an In Vivo code from one participant. Then, upon discovering that other participants described similar experiences, this code was grouped together with other In Vivo codes, such as “it makes me feel much more insignificant” and “all those students, once they graduate they’re set.”

Code mapping. Code mapping arranges the codes from the first cycle coding into a list of categories (Saldaña, 2016). The process of code mapping allowed for the arrangement of data into a systematic approach that prepared the first cycle codes for second cycle coding while ensuring the trustworthiness of the study (Saldaña, 2016).

Second cycle coding. According to Saldaña (2016) second cycle coding involves an analytic strategy through categorization of the coded data to generate emerging themes. Pattern Coding was utilized as the second cycle coding technique in order to group together codes from the In Vivo Coding into more meaningful units of analysis (Saldaña, 2016). Pattern Coding allowed for themes to emerge from the experiences of the first-generation college seniors and provided an avenue to highlight their perceptions. Noticing a pattern, the researcher gathered the cluster In Vivo codes “I always feel like I’m always self-doubting,” “it makes me feel much more insignificant,” and “all those students, once they graduate they’re set” and categorized them into the theme of ‘Identity’ and specially the sub theme of ‘Self-doubt.’

Credibility. To ensure credibility, member checking and bracketing were utilized. Member checking involves sharing transcripts and emerging themes from preliminary analysis of interviews with the participants. This helps to ensure that what the participants said is interpreted correctly by the researcher (Creswell & Poth, 2018). Member checking is “a way of finding out whether the data analysis is congruent with participants’ experiences. Researchers can learn a great deal about the accuracy, fairness and validity of their data analysis when participants review the findings” (Curtin & Fossey, 2007, p. 92). Participants were emailed the transcribed interviews to

check for accuracy of the content, and to clarify any content that needed interpretation (Stake, 1995). Bracketing, which involves being aware of the researcher's consciousness, was utilized to help identify and set aside biases and judgements that may occur while working with the data (Tufford & Newman, 2010).

Transferability. Purposeful sampling and detailed descriptions were used to ensure transferability of the study. This ensured that meaningful data and conclusions can be drawn from the data for others to examine, find meaning, and potentially reproduce the study with different perimeters (Miles, Huberman, & Saldaña, 2014). According to Curtin and Fossey (2007), detailed descriptions of the data especially the qualitative data allows the reader to expect that as much detail as possible has been provided and examined, further ensuring the trustworthiness of the study.

Dependability. An audit trail and journal keeping were used to engage in dependability of the study. An audit trail helped provide cautious documentation of the steps taken during the course of the research study (Miles, Huberman, & Saldaña, 2014).

Confirmability. Confirmability was asserted by engaging in clear description and detail of the research process, in addition to making connections between the data and findings of the study (Miles, Huberman, & Saldaña, 2014).

Assumptions

This study included the following assumptions. First, that all participants will have experienced impostor phenomenon and they will be able to communicate that in the survey and interviews. Second, that participants would be able to fully complete

the survey phase of the study and a good number would indicate interest in being interviewed. Another assumption related to the researcher's preconceived notion that the participants would have some idea of what impostor phenomenon is, since individuals who experience a sense of self-doubt do classify it as such. Lastly, that the participating college seniors would have some idea and examples of resilience and persistence experiences that have helped them make persist in higher education to the senior year. Furthermore, the researcher relied upon the reflexivity approach during data analysis in which Malterud (2001) argued that:

A researcher's background and position will affect what they choose to investigate, the angle of investigation, the methods judged most adequate for this purpose, the findings considered most appropriate, and the framing and communication of conclusions" (pp. 483-484).

Summary

In order to establish and maintain validity, the researcher kept a journal to document and report on her own biases, feelings, and assumptions throughout the data collection and analysis phase (Creswell & Miller, 2000). Additionally, I detailed my beliefs and positionality earlier on in the study, which allowed for readers to understand the position of the researcher in relation to the study. I suspended my beliefs as the study went into the data collection and analysis phase in order to develop and identify themes only related to the study and participants' responses (Creswell & Miller, 2000). Creswell and Miller (2000) argued that "this validity procedure uses the lens of the researcher but is clearly positioned within the critical paradigm where

individuals reflect on the social, cultural, and historical forces that shape their interpretation” (p. 127). Furthermore, a researcher’s beliefs and presumptions about research “are not the same as bias, unless the researcher fails to mention them” (Malterud, 2001, p. 484) and in the case of this study, the researcher has outlined any preconceived notions and closeness to the study and the participants.

This chapter presented the methodology that was used to conduct this mixed methods study regarding first-generation college seniors’ experiences with impostor phenomenon in addition to how their experiences of resilience and persistence that helped them navigate college from freshman year towards degree completion. The sampling techniques utilized in the study were purposeful and homogenous, each of which had relevance to the participants involved in the study. Three scale instruments were used to further investigate the problem. Participants first completed the survey, which provided a greater scope of data by including 51 first-generation college seniors from various universities across the United States. Subsequently, 6 of those respondents participated in one-on-one interviews, in order to dive deeper into the investigation. Ethical considerations were addressed and the researcher’s positionality was stated. An outline of the data analysis was presented, which included descriptive statistics, frequencies, and cross tabulations, In Vivo Coding, and Pattern Coding, all organized and analyzed within Excel, SPSS, and Dedoose. Finally, the topics related to trustworthiness of the study were addressed and the assumptions related to the study stated.

Chapter 4: Data and Analysis

The findings and results presented in this chapter are based on the researcher's analysis of the mixed methods data gathered using the Clance Impostor Phenomenon Scale (CIPS), the Connor-Davidson Resilience Scale (CD-RISC-25), the Grit Scale, and one-on-one interviews. Analysis from the coding and exploration of the six interviews, resulted in five major themes along with seven sub themes. A generous description of impostor phenomenon surfaced throughout the interviews, and exemplifications from the participants who are identified by pseudonym availed a clearer understanding of impostor phenomenon among first-generation college students and their experiences of resilience and persistence. Identifying key themes from the interviews permitted the researcher to identify important findings. The study's results are highlighted for the essential views that aligned with or supported the existing literature on impostor phenomenon, resilience, and persistence.

Purpose Statement

The purpose of this mixed methods study explored the lived experiences of first-generation college seniors to understand the presence of impostor phenomenon during their college journey.

Research Questions

The ultimate goal of this study was to explore the experiences of first-generation college seniors and impostor phenomenon and how the perceived experiences of resilience and persistence aid in degree completion. The following questions were investigated:

1. Do first-generation students experience impostor phenomenon during their journey to graduation?
2. If experienced, in what ways do students experience impostor phenomenon?
- 2b. How do students describe experiences of impostor phenomenon?
3. What perceived factors contribute to the resilience and persistence of first-generation students on the journey to graduation?

Participant Demographics

The participants in this study included a total of 51 students who completed the CIPS, the CD-RISC, and the Grit scale via the survey sent out by the researcher. The participants identified as first-generation college seniors, studying at private universities/colleges across the United States. Most identified as being 23 years old and younger and only 5 identified as being 24 years or older. Due to limited variation, age was not included as a major factor in the data analysis. Out of the 51 participants, 14 identified as males, 35 identified as females, 1 participant self-identified as non-binary and 1 preferred not to say. The latter two were excluded when gender was included in the analysis. There were 12 racial categories with small frequencies in each group that the researcher noted but excluded from the analysis. Three major racial/ethnicity groups emerged from the data and were referred to during data analysis. 19 participants identified as White, 12 as Asian-American, and nine identified as Hispanic.

Of the 51 participants, 21 indicated interest in being interviewed in the survey.

The 21 students were emailed to request interview times be set in order to conduct the 30-minute interview. A total of 11 participants eventually signed up to be interviewed. A follow-up email was sent out to the 10 students that had not yet signed up for an interview reminding them to sign-up for an interview. The students did not respond or sign-up for an interview. Out of the 11 students who signed up for an interview, two students, ended up not showing up for the interview. Of the nine conducted interviews, 6 were used in the study's qualitative phase (2 males and 4 females) as displayed in table 6. Three interviews were discarded because there were more female participants than males. The study aimed to have a balanced number of male and female participants to highlight an equal representation of both male and female first-generation student experiences. Only two male students were interviewed and therefore, their responses were considered among the six interviews used in the study. The four female interviews that were used in the study were selected because they presented at least one of the ethnic/racial categories in the study (2 white and 2 Hispanic/Latina). The three discarded interviews were female and identified as (1=white, 2=Hispanic/Latina). Table 6 shows the interview participant demographics including the pseudonym names used to protect the confidentiality of the participants, their gender, race and major/area of study.

Table 6*Interview Participants Demographics (N = 6)*

Pseudonym	Gender	Race	Major
Andy	Male	Asian/Pacific Islander	Marketing
Richie	Male	White/Other	Biology & Chemistry
Dotty	Female	Hispanic	Biology
Mandy	Female	White	Environmental Ethics & Policy
Nellie	Female	Hispanic	OTM & Finance
Ally	Female	White	Theater Design & Management

Researcher Positionality Revisited

I am a first-generation college student who has experienced and still experiences impostor phenomenon. As a researcher of this study, my experiences encourage me to provide a voice for students and even working professionals who have and still experience feelings of impostorism. This study has been validating for all the impostorism feelings that some students thought they felt alone. This study was clarifying because as the participants shared their experiences, they came to a realization that their feelings were real and their stories valid as first-generation college students who have and still experience impostor phenomenon. These students tapped into their resilience and persistence avenues to make it to senior year. As the participants shared their stories, I found myself relating to those experiences and intense feelings of impostorism yet as a college student, I was not able to understand and classify those feelings and experiences as impostor phenomenon. The participants shared stories regarding their campus culture, interactions with faculty, social and cultural capital relationships, and relationships with their families. All these stories

made me think back and question how I had handled those same situations as a college student. Personally, I thought that asking professors for help was a sign of weakness and that those professors would think I was not smart enough. I was not able to lean on my family because they were all the way in Uganda, I did not want them to worry about me, and they did not understand the American higher education system. Overall, I was proud that although the participants in this study had experienced impostorism, they had made it to senior year and are close to degree completion in the spring of 2021. During my third year of college, with no internship prospects in sight and college courses getting hard, I wanted to quit school. I felt like a fraud that had fooled everyone. It was inspirational to hear from the participants that despite feelings of fraudulence, they were able to persist, remain resilient and make it to senior year.

As a researcher, it is validating for the stories of the participants to give and add a voice to my own personal experiences as a first-generation student and coping with impostor phenomenon. The narratives of the participants validated my feelings, and my quest to keep persisting, even when the intense feelings of impostorism overwhelm me. The participants shared that knowing they were not alone was in itself validating and their feelings and my own feelings were real. The connection I established with the participants took me back to those moments when I was finally able to ask for help, feel vulnerable with the people I trusted to help me succeed and graduate from college.

I expected the overall narrative from the participants to be that of defeat, worthlessness, and despair for being first-generation and experiencing feelings of

fraudulence. I did not expect to learn that those who exhibited and narrated feelings related to impostor phenomenon could still be persistent and resilient. I have deep admiration for these participants because their stories reassured me that, despite feelings of impostor phenomenon, I can still ask for help, continue on the mission I have set out despite the self-doubt and the discouragements along the way.

The researcher bracketed personal bias by keeping notes and journaling especially during the qualitative process. I was able to uncover a list of personal identities, some intersecting with the shared experiences of the participants. In order to account for personal bias, I made a note of how my identities would bias the responses of the participants during the interviews. After the interviews, I emailed the six participants a copy of the original, unedited interview transcript to ensure member checks.

Quantitative Data Findings

I was encouraged to reach out to Dr. Pauline Clance to ask for permission to use the CIPS. I received permission via email to utilize the scale in the survey, along with the scoring method. Permission to use the CIPS can be found in Appendix B. In addition, I reached out to Dr. Jonathan Davidson to utilize the Connor-Davidson scale for resilience (CD-RISC-25) and received permission to use the scale for the study, along with the scoring sheet. Permission to use the CD-RISC-25 can be found in Appendix C. The researcher identified a free to use, without the author's written permission to measure persistence. The study utilized the 12-item Grit scale by Duckworth. The three scales were uploaded to Qualtrics, a data collecting software

along with some demographic questions (race/ethnicity, major, age, gender, if first-generation college student, year in college and type of institution, private or public).

The survey was then sent out via a Qualtrics survey to the participants. The survey did not collect participants' identifying information, therefore no ethical concerns were present. Table 7 shows a summary of the participants for each scale.

Table 7

Participant Demographic for the Connor-Davidson Scale, Grit Scale, and the Clance Impostor Phenomenon Scale Results (N = 51)

	<i>N</i>	Mean	SD	Min	Max
CD-RISC	49	68.65	14.45	37	100
Grit Scale	50	40.50	7.14	21	55
Clance IP Scale	45	72.36	14.56	40	100

Clance Impostor Phenomenon Scale findings. The CIPS is a 100-point scale composed of 20 Likert style questions (ranging from 1 to 5). According to Dr. Clance, if a participant's total score is 40 or lower, that means that the participant has low impostor phenomenon, or experiences few impostor phenomenon experiences. A score between 41- 60 indicates that the participant has moderate impostor phenomenon experiences; a score of between 61- 80 means the participant frequently experiences feelings of impostorism. Lastly, a score higher than 80 means that the participant often experiences intense impostor phenomenon experiences (Clance & Imes, 1985). Table 8 illustrates the overall findings/frequencies related to the CIPS.

Table 8*Impostor Phenomenon Scale (CIPS) Frequencies*

CIPS Scores	Frequency	Percent
Low/Moderate, 0-60 points	11	24%
Frequent, 61-80 points	19	42%
Intense, 81 points and above	15	33%
Total	45	100%

Due to low frequencies, low and moderate categories were combined and data were disaggregated by gender and race as shown in Table 3. Two participants who did not identify as male or female were excluded. Six participants did not complete all parts of the CIPS and were also excluded for a total number of 43 participants ($n = 43$). Table 9 displays the Clance Impostor Phenomenon Scale scores by gender.

Table 9*Clance Impostor Phenomenon Scale Scores by Gender (N=43)*

	Male		Female	
	<i>n</i>	%	<i>n</i>	%
Low	7	50	3	10.3
Frequent	6	42.9	12	41.4
Intense	1	7.1	14	48.3
Total	14	100	29	100

Table 10 shows comparisons of impostor phenomenon experiences by gender and race.

Table 10*Impostor Phenomenon Experiences by Gender and Race*

	<i>n</i>	Mean	<i>SD</i>	Min	Max
Total	45	72.36	14.56	40	100
Gender					
Female	29	77.41	11.73	56	94
Male	14	63.43	15.60	40	100
Race					
White	20	73.35	13.30	52	100
Asian	13	69.54	14.59	49	93
Other	12	73.75	17.24	32	40

Data analysis presented in Tables 9 and 10 indicates that females are more likely than males to have intense impostor phenomenon feelings and experiences (48% and 7% respectively). An independent samples *t*-test revealed a difference in mean CIPS scores between males and females confirmed that the mean female CIPS score of 77.4% was significantly higher than the mean male score of 63.4%, $t(41) = 3.27, p < .02$. Therefore, it seems that first-generation female seniors experience a higher intensity of impostor feelings compared to the first-generation male seniors.

Grit Scale findings. According to Duckworth, questions 1, 4, 6, 9, 10 and 12 on the Grit Scale are assigned the following points: 5 = Very much like me, 4 = Mostly like me, 3 = Somewhat like me, 2 = Not much like me, and 1 = Not like me at all. For questions 2, 3, 5, 7, 8 and 11, the participants were assigned the following points: 1 = Very much like me, 2 = Mostly like me, 3 = Somewhat like me, 4 = Not much like me, and 5 = Not like me at all. Each participant's points are all added up. Although the original score is then divided by 12, such division simply averages the

total scale score per question, which does not add anything to the analysis. For parsimony reasons, I chose to keep the original total points as the measurement.

The maximum score on the Grit scale is 60 = extremely gritty and the lowest score on the scale is 12 = not at all gritty. Table 11 shows the descriptive statistics of the Grit Scale by gender and race.

Table 11

Descriptive Statistics of Grit Scale by Gender and Race

Demographic Category	<i>n</i>	Mean	<i>SD</i>	Min	Max
Total	50	40.50	7.14	21	55
Gender					
Female	34	39.79	7.79	21	55
Male	14	41.64	5.71	29	49
Race					
White	23	39.74	7.25	28	55
Asian	14	40.43	7.88	21	49
Other	13	41.92	6.40	32	52

There was no significant difference between the mean values of males (41.6) and females (39.8) on the Grit Scale (t -test value = 0.8, two-tailed $p = .43$). However, the distributions of the scores are different from each other as shown in Figures 3 and 4. While female scores tend to cluster around the mean, male scores were more evenly distributed without a clear pattern. It is vital to be cautious while interpreting the figures because of a small sample size, particularly in males ($n = 14$).

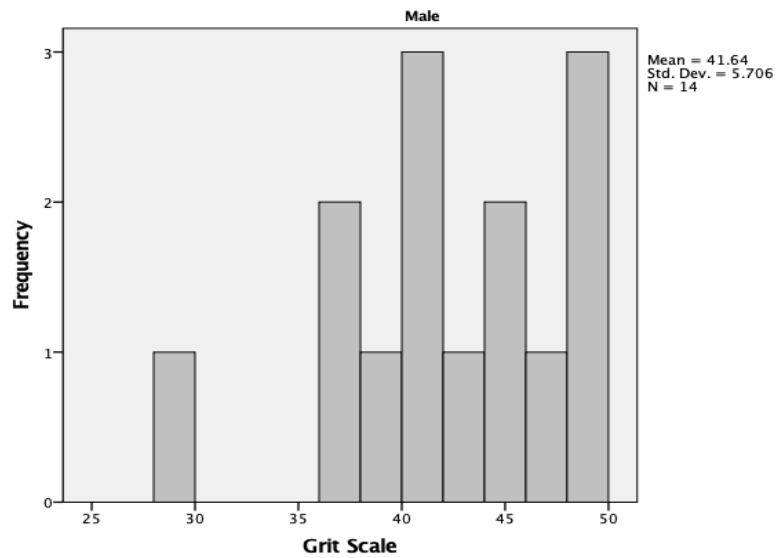


Figure 3. Histogram of Grit Scale – Males

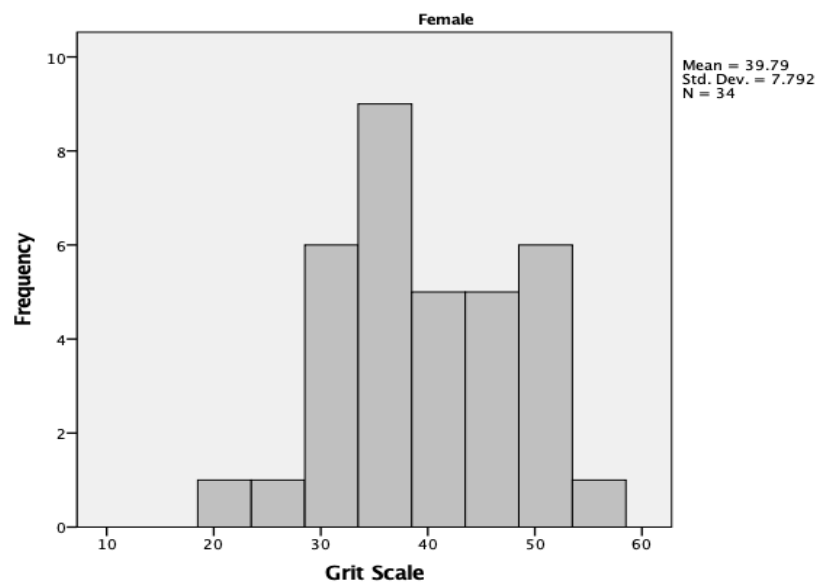


Figure 4. Histogram of Grit Scale – Females

When the Grit Scale is recoded in two categories 0-40 and above 40, there is no significant differences between males and females. Males are evenly split (7 and 7)

while 19 females have scores 0-40 and 15 females have scores above 40. Therefore, the results suggest that there is no difference between males and females on the Grit Scale.

Connor-Davidson Resilience Scale findings. Items in the scale range from 0-4 and a total score of the participants was obtained by adding up all the 25 items, which should yield a score between 0-100. The lower the score, that means that the participant has lower resilience and the higher the score, indicates greater resilience. Table 12 displays the Resilience Scale experiences by gender and race.

Table 12

Resilience Scale Experiences by Gender and Race

	<i>n</i>	Mean	<i>SD</i>	Min	Max
Total	49	68.65	14.45	37	100
Gender					
Female	34	67.15	14.21	37	97
Male	14	72.50	15.37	46	100
Race					
White	22	69.05	14.52	50	100
Asian	15	67.33	16.52	37	97
Other	12	69.58	12.57	50	94

Data indicated that males have a slightly higher mean on the Resilience Scale ($N=14$, 72.50) than females ($n = 34$, 67.15). However, this difference is not significant ($t=1.16$, $p < .25$). The shapes of the distributions of the scores for males and females were similar. Likewise, there is no difference between racial pairs in their mean scores. ANOVA F-tests did not reveal a difference based on race when all racial categories are tested jointly. It is important to note that the mean value of the

resilience scale in the sample (68.7) was significantly lower than in the general population (79). The mean difference was -10.3, $t=-5$, $p < .001$, two-tailed. This suggests that first-generation students have a much lower resilience level than the general U.S. population regardless of their sex or race.

Qualitative Data Findings

This section presents data and analysis from the interviews to offer in-depth descriptions of participant experiences related to impostor phenomenon, and resilience and persistence. The data and analysis in this phase helps to answer research questions 1, 2, & 3.

Key Themes. Five themes emerged from the analysis of the literature, CIPS, CD-RISC-25, Grit scale, and the interviews. The following themes were initially determined by applying the transcendental phenomenology method, which according to Moustakas (1994) aims to highlight the important narratives and descriptions of a participant's experience. The five themes that emerged were 1) identity as a first-generation college student; 2) cultural and social capital; 3) campus culture; 4) family; and, 5) advice. Each of these five themes included sub themes as illustrated in Figure 7 and each is explained throughout the chapter. Theme 5, which involves findings related to *advice* will be discussed in chapter 5 as recommendations. The five themes that emerged during the qualitative phase and their subsequent sub themes are discussed further in this chapter and are displayed in Table 13.

Table 13*Study's Key Themes and Sub themes*

Identity
Self-doubt
Sum up of Experience
Impostor Phenomenon
Cultural and Social Culture
Comparison to Others
Campus Culture
Resilience and Persistence
Family Aspects
Pride
Understanding and Encouragement
Finances
Advice
Support for FGEN Students
Affirmations

Note. The Advice theme will be discussed in chapter 5 as recommendaions.

Identity

The participants knew and understood they were first-generation college students and first in their family to attend a four-year university. They identified themselves this way and understood what it meant to be the first in their family to be close graduating from college. It was apparent that being first-generation was a major part of the identity of the six interview participants. The participants described different situations that contributed to their first-generation identity throughout their four years of college. Nellie described her experience as the first in her family to attend college as:

Oh my gosh, this means so much to me. Because my dad is an immigrant. He came from Cuba. He was born in Cuba. And then my mom, her side of the family is from El Salvador. She was born in California. But they had little to no college experience at all. But for me, this means so much to me because they have sacrificed, basically, all of their lives for my sister and I to get the education that they wanted for themselves but, for us too. Because they see that education is key to being successful and opening new doors, new opportunities and to be successful in life. So yeah, my education is very important to me. I take it very seriously.

Another student was also aware of what it meant to be a first-generation college student. Mandy responded by saying, “I think it means there are expectations on me to achieve something greater. I definitely think that there are a lot of kind of familial expectations that I am the one who will do well.” For Andy, his first-generation student identity is intertwined with being an only child as well. Andy describes his experience as being different from maybe most first-generation college students because, again as an only child, he felt he needed to make his parents proud. When asked to elaborate on what he meant, Andy responded by saying, “I grew up in a Hawaiian/Asia household and it was kind of, even though my parents did not go to college and they only graduated from high school, the whole expectation was that I was going to succeed and go to college.” Each participant described almost similar situations that contributed or made up their identity of what it means to be the first in their family to attend a four-year college.

The three sub themes that emerged within the identity theme were 1) self-doubt 2) sum up of college experience, and 3) experiences of impostor phenomenon.

Self-doubt. All participants at some point during their college journey from first year to senior year had experienced varying levels and experiences of self-doubt. Self-doubt was identified as a major part of the students knowing and understanding their identity, first-generation college students. When asked how often he felt these feelings of self-doubt throughout his four years in college, Richie responded by saying “I think freshman year.” Andy also added:

I was taking a high-level Philosophy course and a high-level Business course that I actually was not too skilled in, and I was doing very terrible in it, obviously. And because of the whole pandemic adding on top of that and being online and not having social interactions as much as I would like, it got me to a really low point where I was like, Maybe I should just drop out. Maybe that'll be easier on me. Way easier if I just do that.

Andy's experience of feeling that he was not good enough to pass the Philosophy and Business courses brought about self-doubt that made him think that dropping out would be easier. In Nellie's case, she did not even know that the feelings of self-doubt she had were associated to being a first-generation college student. Nellie noted that, “Yeah. I had no idea until this year. I was like, oh my god, this kind of ties my whole life together.”

All six participants at some point during the interviews reflected on their four years and how far they had come. While reflecting on the journey to graduation, the

participants voiced experiences of self-doubt, doubting how they had made it this far. The participants rationalized their self-doubt by sharing moments of self-doubt and then something that had helped them overcome that self-doubt. When asked about impostor phenomenon and the self-doubt that came with that, Ally shared that, “I’ve felt like I hadn’t belonged in my department for the majority of my time at college.” Ally rationalized her self-doubt moment and added that, “It was only after I started taking more communications and business classes for fun that I realized I’m not an idiot, and I am creative and smart.” When asked to elaborate on what she meant by “I realized I’m not an idiot, and I am creative and smart” she stated, “I had to get validation from a lot of outside sources. It wasn’t until I started getting paid for my art that I felt successful or worthy or even like an artist.”

Andy, Ally, Nellie, and Mandy all exhibited self-doubt, which plays directly into the experiences of impostor phenomenon. Mandy’s rationalization of finally feeling like she was smart, receiving validation from others, and getting paid for her art, contributed to her resilience and persistence towards degree completion.

Sum up of Experience. All six participants were asked to sum up their college experience in one word. Responses included: new, first, complex, challenging, opportunity, and enlightening. The purpose of asking the participants to sum up their four-year college experience with one word was intended to help them vocalize what it meant to be a first-generation college student. Chapter 2 discusses various research on what it means to be the first in one’s family to attend college. This study aimed to

include first-hand narratives of first-generation college students and what it meant to them to be first in their families to attain a four-year degree.

When asked to use one word or phrase to sum up her experience during the four years in college, Nellie paused and when she finally spoke, she stated that, “one word that ties it together is opportunity.” When asked to elaborate, Nellie stated:

I think it just ties in for all my four years. I have seen so many different avenues to get different opportunities. I am an Operation and Technology Management, finance double major and with these majors I have chosen, there is been so many opportunities to grow into the field that I want to be in. My university offers so many different things, like clubs. Especially in the Operation and Technology Management program, they offer speed networking, mentorship. So, things that really help the students succeed in their careers as well as not only academically, but also, just as a person too. But yeah, I think opportunity is a good word to concise my whole four-year experience at my university.

Nellie’s description of her years at college was opportunity. She felt like the college she attended availed her the resources and the prospects to succeed as a first-generation college student regardless of impostor phenomenon. Andy, shared a similar positive word to sum up his experience in college. When asked to describe and sum up his experience at the four-year college he attended, Andy remarked:

Man, that’s a hard one. But I would say new or first. First, meaning new, obviously. But meaning I got to do all these different things that I never

experienced being back home. Back home, since I am actually an only child in my family as well, I am typically isolated in my house because my mom doesn't want me to go out or get hurt. So, coming to college, it was a new experience for me to really spread my wings, experience dorm life, sleep over at a friend's house, travel.

For Andy and Nellie, coming to college and describing it as a positive experience adds a much-needed voice to the first-generation student story. It is important for Andy and Nellie's narrative to be shared and for other first-generation students to gain a sense of 'we can do it.' Richie's summary of his four years at college is described as, "enlightening, because there is just so much new information." Richie added that:

I chose enlightening because, I have learned a lot both in education and myself. I have learned a lot about the fields that I want to go into, but I feel like I have learned about myself in the process, the things I am good at, the things I am prepared for in my life.

The perception that Richie, Andy, and Nellie gave was that, regardless of feeling like they did not belong, they were grateful for the opportunities, for new experiences and an enlightening four-years. On the other hand, Dotty, Mandy, and Ally's summation of their college experience was not as positive as Andy, Nellie, and Richie's.

Dotty described her experience as challenging. She went on to explain that:

I think part of a big defining characteristic of my college experience has been letting go of the idea that I have it all figured out. It seems like all the other students, once they graduate, they are, and they can start practicing their profession. I am a Biology major, and I was trying to figure out what it was I actually wanted to do. And it's just been a really challenging experience.

Another student, Ally, also described her experience as a first-generation college student as challenging. I asked Ally to explain why she chose the word challenging, she stated that:

I did come to this university for the educational challenge. However, I have found that there is just a level of social/societal challenge that has comes with that and I was not prepared for that. I was not prepared to have to fight every single turn to get things done while I am here in a way that meets my accommodations or appreciates my fiscal standing.

Similarly to Dotty and Ally, Mandy also shared that her experience as a first-generation college student was complex. I asked Mandy why she chose the word complex to describe her experience and she narrated that:

Again, I am so grateful that I was able to attend a four-year institution. So grateful that I have been able to finish or will soon be able to finish.

Financially, it has not been easy, so I am grateful for that. But I think first-generation students in general face a lot of barriers of just lacking institutional knowledge, familiarity with higher education and resources that are available.

At the same time, I have struggled. I have a disability and it has been hard,

dealing with accommodations and dealing with just access issues in general and support from students, support from professors , seeking those extra means of support because it is not always easy to balance being a college student and health issues. In addition, the political climate tying into that and all that kind of stuff.

Impostor Phenomenon. All six interview participants were asked if they were familiar with impostor phenomenon and how they would describe impostor phenomenon in their college experience. The participants were familiar with impostor phenomenon and shared their unique varying descriptions and experiences with impostor phenomenon throughout their journey to graduation. Participants were asked if they were familiar with impostor phenomenon and a follow-up question was asked to describe impostor phenomenon in their experience. Ally said, “I am familiar with impostor phenomenon.” She added that, “As someone in the arts field, I think it is that much harder to feel like you are competent, when there are so many talented artists and they could make art better than you.” Ally was not alone in her familiarity with impostor phenomenon as a first-generation college student. When asked how often she felt like an impostor in college, Ally answered saying, “I have felt like I had not belonged in my department for the majority of my time at college. It was only after I started taking more communications and business classes for fun that I realized I’m not an idiot, and I am creative and smart.” Just like Ally, Mandy also said she was familiar with impostor phenomenon. Mandy retorted that:

Yeah, definitely. I feel like I experienced it a bit definitely early on in my college career, probably the first year or so. I have gotten more familiar with it going to a higher education institution. I think there is also a greater rationality between impostor phenomenon and white privilege. I think a lot of people, especially at a predominately white institution experience impostor phenomenon. Dotty's experience aligned with Mandy's when asked if she was familiar with impostor phenomenon. Dotty narrated that:

I think I would say I am pretty familiar with impostor phenomenon. I think it is especially present in a school like my university where there is a lot of white peers. I do not mean to be malicious, or think they do it on purpose, but with how rich of a school as my university, I feel like it just piles up. Coming from a different background when compared to my rich peers, it is really easy to fall into that trap of being like, do I actually belong here?

Dotty's experience is discussed greatly in the literature where first-generation college students who attend predominately white institutions feel more out of place, often causing them to ask if they belong on their college campuses. Andy noted that, "Yes, I am familiar with impostor phenomenon. I feel like we always had this talk in our meetings and impostor phenomenon is always going to be relevant." Andy went on to share his experience noting that:

I think that we all are a victim of impostor phenomenon at some point, whether it be young, old, middle-aged. It is always going to be there, thinking that you

are not good enough. Even as a senior, I probably think that I am not good enough.

Nellie mentioned that she had learned about impostor phenomenon this past year. Nellie is not alone in not knowing that the feelings of self-doubt or phoniness have a name, and that name is impostor phenomenon. Nellie explained that while watching a video, the term impostor phenomenon came up and she looked it up online only to discover that, “this literally is my life.” Nellie further describes her impostor phenomenon experience:

I think I can resonate with this because I always feel that I am not able or have the capabilities of doing something or that sometimes I am fraud. I was given an internship at one of the big four companies and getting that, I was like, oh they definitely got the wrong candidate. I don’t know why they chose me. I kept proceeding through the whole application process, from an internship to a job offer. Throughout the whole process, I was like no way, no, this is not true. I do not feel like I have the capabilities or the knowledge to be at this high level of a company.

Richie, just like the other five participants, also acknowledged being familiar and experiencing impostor phenomenon. He noted that, “I would say to a degree, yes.” Asked to elaborate further on his experience with impostor phenomenon, Richie asserted:

I had to talk a little bit about this when I was applying to medical school actually. Growing up, I just felt like there were things because of the family I

come from and the little money and everything that was going on in my family at the time, that there were certain opportunities that were not meant for me. I felt like there were opportunities that some of my classmates were doing that I just could not do. Like even if there were resources open, I just felt like that was not meant for me.

Cultural and Social Capital

First-generation college students often compare themselves to their non-first-generation college peers and feel the need to “fit in.” Cultural and social capital play a large role in how first-generation college students navigate college on their journey to graduation. Bourdieu (1977) explained cultural capital as having the understanding of the dominant culture in a society and the ability to recognize and use educated language (p. 494). For purposes of this study, cultural capital refers to self-guided knowledge of higher education to be successful in academic settings (Collier & Morgan, 2008). While social capital has been defined as the social support of a young individual’s interpersonal network and the access to institutional privileges and resources (Staton-Salazr, 1997).

Experiences related to cultural and social capital surfaced from the interviews when some participants were asked to talk about their cultural and social experiences in relation to feeling like an impostor and how they coped. Ally mentioned that she worked on her art on the side. She added that:

I forced it into the market. I forced people to see it. I got paid for my brain.

That is how I have gotten this far. I fight when people walk on me. It is exhausting.

Ally's experience made it apparent that social and cultural capital serve as an influence for first-generation college students to create and develop a sense of culture, which emphasized their assessment of the overall experience during their four-years at college. When asked how she has coped from the social-cultural perspective, Mandy narrated that she has found community and support with her fellow first-generation college students. Mandy elaborated:

A lot of my close friends are also first-generation, or even if they are not, they have high expectations on them to succeed. We do talk and try to offer each other support about our families' expectations of us.

Mandy went on to add to the importance of social capital and the role it plays in the college journey of first-generation college students. Mandy noted that, "I did not know how much it had impacted my college experience until later in my junior year." Mandy was alluding to the lost opportunity of not having joined the first-generation student club on campus, where social support is offered to first-generation college students. Mandy added that she found support from friends she lived with off-campus and found ways to cope. Just like Mandy, Doty spoke to the importance of having social and cultural capital as a first-generation college student. Doty noted that living at home and being the eldest sibling made it difficult for her to fully engage and participate in on-campus activities. Doty elaborated saying:

With familial responsibilities, it was hard to prioritize study groups on campus. It made it hard to build community and I felt disconnected from my college campus. When I was done with classes, I had responsibilities to get to at home. Andy spoke to the importance of clubs and mentors on campus as a way to help first-generation college students build their social and cultural capital. Andy mentioned joining the Diversity and Inclusion Programs at his school and also serving as a First-generation Ambassador as a way of branching out and getting advice on how to navigate college. Andy expounded that, "Joining the Diversity and Inclusion Programs helped me connect and add events. Getting into a close knit community helped me learn to branch out and being offered advice."

Asked how her identity as a first-generation college student, a Latina, and attending a predominately white institution has played into her social and cultural identity, Nellie replied, "I am Latina and also White, I am always questioning whether to show my true Latina side or assimilate to the White side." Nellie did expand on her response by saying:

Because the majority of my friends at college are white, I am always afraid to say things like, my name. I always say it the white way, so that people can say it in their pronunciation. I think I am always trying to assimilate to them, just so it is easier on my end and I do not have to explain myself. There is definitely a shift in the way I act at home where I have mainly Latina friends and at college, where I have mostly white friends.

Comparison to other students. This stood out as a sub-theme among the first-generation college students during the interviews. Ally spoke about not belonging in her department and how she constantly compared herself to her classmates. Nelly spoke about comparing herself to the male students in her major. She noted that, “being in a heavily male dominated major being one of three girls in her classes made me feel inadequate.” Nelly added that:

Knowledge-wise, I always feel like I am always lacking in some sort and I end up second guessing myself and comparing myself to my classmates. Whenever I am asking a question or an answer, I always phrase it as a question instead of saying it like, Oh, this is the right answer, because I always think, it is wrong.

When asked about his experiences at college, Richie echoed comparing himself to his classmates who he thought were doing better than him or knew more than him. Richie added that:

I felt that there were opportunities that some of my classmates had that I could not do, even if there were resources set aside to help students from low socio-economic backgrounds. Even if the resources were available, I just felt that they were not meant for me.

Andy also added that he often compares himself to other students, adding that, “I think that I am not good enough and will not get the internship I want.” When asked to elaborate, Andy added:

When I am applying for internships, I am thinking, am I going to be good enough? Am I going to be able to fulfill my job? Am I going to be able to be better than the next person that is also applying for the same job?

Similarly, Dotty described her experience as, “the culture at my college can make it really easy to compare yourself to others.” Dotty further added that:

At college, there are students in professional schools like the School of Nursing and the School of Engineering. I feel like the students in these professional schools already know what they want to do after graduation and once they graduate they are set and can start their professions right away. As a Biology major, I am still trying to figure out what I actually want to do with my degree after graduation.

Mandy added to the sub-theme of comparison to other students by saying that, “having a disability has led me to try to overcompensate.” Mandy expounded that:

Compared to my classmates, having a disability means I have to work almost harder in case I do get sick or I need to take more time off. I feel I have to overcompensate and do really well in college and push myself harder than my classmates even when I have been going through really difficult times, just so that I can prove myself to my professors.

Just like Dotty, Andy discussed comparing himself to other students academically. Andy stated that:

Whenever I fail a class or I am doing badly in a class, for some reason, I decide to compete with someone and they are doing better than me. I find myself

comparing myself to my friends in the School of Engineering, yet I am in the School of Business. When I talk to my engineering friends, they tell me how they are taking high level math classes and that what I am doing in business is not as important or hard as what they are doing.

Campus Culture

In chapter 2, the literature supported the importance of institutional support toward first-generation college student success. Pizzolato (2003) stated that institutions of higher education need to create programs aimed at assisting student populations like first-generation students that are at risk of dropping out. Some of the interview participants revealed the importance of clubs or programs on their college campuses that have supported them, as first-generation college students. When asked if he was familiar with impostor phenomenon, Andy responded that, “yes.” Andy added that, he had learned about impostor phenomenon from one of the meetings for first-generation college students at his college campus. At his college, Andy disclosed that he volunteers as a first-generation student ambassador. Andy’s role is part of a program at Andy’s college that helps support first-generation college students and offers a space for them to gather, share, and be supported. Andy shared that:

As a first-generation ambassador I have been giving new students advice basing on my experiences of what I would tell myself or wished I would have known coming to college as a first-generation student. I would say, to not be afraid to go and experience new things.

As a commuter student, Dotty appreciated having a program on her college campus that supports first-generation college students. Dotty shared that:

At my college, we have our own little community. Before I joined and started getting involved, I was a commuter student and I was finding it really hard to get connected to campus and feel like I was part of it. So having a first-generation college student program is something that is really meaningful to me and being a FGEN [first-generation college student] student, it has allowed me to find that sense of community and belonging.

Andy shared that having programs like the Diversity and Inclusion Programs at his college where he was able to connect and go to events with other first-generation college students helped him feel connected in college. Andy added that, “I was able to get into these close-knit communities and that helped me to start branching out and getting advice.”

Resilience and Persistence factors. The interview participants were asked about their perceived experiences related to resilience that helped them toward degree completion. Ally shared that:

I am here. I am on track to graduate. But I have had to fight for it every step of the way and not even with myself, but also the people I pay to teach me. I am not really over the feelings of anger. Which is good, because I think at this point it is what fuels me to finish. I have so many people to prove wrong.

When asked what factors helped contribute to her resilience from first-year to senior year, Ally attributed her courage to, “telling people I am worth it” and hearing

from supportive people that, “school will not be forever, even though it feels like it and that I am competent.”

Nellie attributed her resilience to “separating feelings from fact.” When asked to elaborate, Nellie mentioned that:

Just because you feel something in a certain way, it actually is not what you are. It is about having confidence to know what you are capable of doing and embracing your differences and not self-doubting a lot which for me comes up a lot, especially being in a male dominated major.

Speaking to his resilience, Richie acknowledged the importance of family. Richie expounded saying:

I think the main factors are family and friends. Definitely my family because as the youngest of four, all my other siblings are six plus years older than me. Some briefly attended college, but were never successful to reach graduation. Throughout my life, seeing what they have done both incorrectly and successfully, I have learned how to do things in a better way.

As part of her persistence strategy, Ally shared that she worked on her art work on the side. This did not only help her make extra money needed for college, but also Ally shared that, “I forced my art into the market and forced people to aww it. I got paid for my brain. That is how I have gotten this far.”

Relatedly, Dotty shared that having a job while going to school full-time contributed to her resilience. Dotty echoed that:

I started working in high school, and I kept it up in college. I never thought much of it until I met other students that had never had a job while in college like me. I think that was really crazy because I think it is a privilege to be able to do school full time and not have any other responsibilities. If I had the opportunity, I would probably not have worked. But I think having to work throughout my four years has definitely built my resilience because I have to prioritize, and have to definitely time manage a lot better.

I asked Mandy what factors she thought have contributed to her resilience and persistence throughout college. She responded enthusiastically that, “probably my stubbornness.” Mandy intricately echoed that:

I am a persistent person. I think even though there are expectations on me from my family, they are supportive of me getting my degree and they are proud and try to remind me of that often so I think that has carried me forward.

Mandy also added that study groups and “talking to other students in my major about things like climate change keep me pushing forward and knowing that the work I want to do is important.” Lastly, Mandy emphasized that her persistence comes from knowing “there are expectations on me, both from my family and myself, to go and do good in the world after college.”

Lastly, when asked about factors that have contributed to his resilience or persistence, Andy passionately shared that, “First-generation students, have to be confident in themselves.” He underscored the importance of:

Believe in yourself. It is the same thing as saying, you have got to love yourself before you can love other people. The only way that this can work is if the first-generation student is able to persist and believe in themselves, whether it is real confidence or fake confidence. If they are able to persist and believe in themselves, find their ambitions and their why, there should not be a reason why they should not be able to reach out to professors, go to events, become student leaders. As long as a first-generation student or anyone suffering from impostor phenomenon is able to find confidence in themselves, I think they will be just fine.

Family Aspects

This theme discusses the responses of the interview participants regarding the contributions and influences of family on their journey to degree completion as first-generation college students. The first interview question asked the participants what it meant to them being the first in their families to go to college. Richie answered the question by noting:

From a young age, my parents always told us education is the most important thing because my parents, did not go to college. My mother did not even graduate high school and always worked in factory jobs and low income jobs.

Richie further added to what his first-generation student status meant to his entire family by saying that, “My parents wanted my siblings and I to have better lives and they thought the best way to do that is through getting a good education.”

Similarly, Dotty shared that “From a young age, I thought that being an FGEN [first-generation college student] would give me an opportunity to break some of the generational cycles that have kept my parents from having the same opportunities that I have now.” Dotty further elaborated what her being able to attend college meant to her family, adding:

They are from Mexico [referring to her parents]. There is a lot of different power dynamics that come from being immigrants to the United States. And so, I think being the first person to go to college, was my time to prove that all of their sacrifices and hard work were worth it. I am taking advantage of those opportunities and setting it up for my siblings and everyone else that comes after me.

Pride. When asked what it meant to him being the first in his family to attend college, Andy echoed, “I think it is more of a pride thing that I can do something for my family and that they have this expectation for me to succeed.” Andy was not alone in empathizing what a source of pride it is for families of first-generation college students for their students to pursue a four year degree. For Nellie, she noted that, “This means the world to me, being the first one to graduate in my family, my immediate family.” She further added:

My dad [father] is an immigrant from Cuba. My mother is from California but both of them [her parents] had no college experience and only their high school. So, this means so much to me because they [her parents] have

sacrificed all their lives for my sister and I to get the education that they wanted for themselves.

Relatedly, Ally added that “It means a lot to me to be able to go to college. It is something not easily afforded. I recognize it gives me a leg up.”

Understanding and Encouragement. For Mandy, being the first in her family to attend college meant that, “There are expectations on me to achieve something greater.” With that expectation, Mandy hoped that her family would be understanding of the endeavor she was undertaking. She understood that being a first-generation student meant “that there are a lot of familial expectations that I am the one who will do well.” For Mandy, those family expectations were a source of encouragement to succeed in college. Mandy added that, “I have a disability and, so that has been really hard dealing with accommodations and, dealing with access issues. Support from friends, family, and professors has been helpful.”

Finances. Ally recognized that attaining a college degree would “Give me a leg up” but also spoke about how “it was not something easily afforded.” Ally went further to speak to the financial awareness and burden attaining a college degree brings:

I did come to College P [alias for school] for the educational challenge.

However, I have found that there is just a level of social/societal challenge that has come with that and I was not prepared for that. I was not prepared to have to fight every single turn to get things done while I am here in a way that meets my accommodations and affects my financial standing.

For Mandy, she described her first-generation college experience as complex.

When asked to elaborate, Mandy shared that:

I am grateful that I was able to attend a four-year institution. Financially, it has not been easy. I think first gen [first-generation college students] in general face a lot of barriers like lacking institutional knowledge, familiarity with higher ed [higher education] and resources available like financial aid.

Richie also shared that his mother “Did not even graduate from high school and always worked factory jobs and low income jobs.” So, pursuing a college degree although pricey, was “My siblings and I to have better lives and they [Richie’s parents] thought the best way was through getting a good education to improve upon my life and financials.” When asked if he was familiar with impostor phenomenon, Richie said, yes, he was. Asked if he cared to elaborate, Richie said:

When I was applying to medical school, I think especially growing up, I just felt like there were things because of the family I came from and the little money we had and what was going on in my family at the time, that there were opportunities that were not meant for me, but were for others.

Likewise, Dotty expressed feeling like an impostor because of the financial differences between her and other students. When asked to elaborate how familiar to what extent she felt like an impostor, Dotty shared that:

At a school like College of P [alias for school] where there’s a lot of white peers, I do not mean that to be malicious but especially how rich of a school it is, I feel like it just piles up. Coming from a different background, when you

are in your good moments, it is like, I can be in the same space that my rich white peers can be in.

Summary

In summary, this chapter provided an examination of experiences from first-generation college students. Through the surveys and interviews, first-generation college students shared their voices and experiences related to impostor phenomenon. The quantitative and qualitative data provided a detailed and clear picture for how first-generation college students experience impostor phenomenon, how they describe it, and the perceived factors that have contributed to their resilience and persistence on the journey to graduation. Each of the four research questions were explored and data were analyzed in the quantitative and qualitative sections of this chapter.

Findings from the analyses in Chapter 4 will be discussed in Chapter 5. A summary of the results, a discussion of the findings, limitations, and recommendations for future research will be detailed in Chapter 5.

Chapter 5: Summary, Discussion, and Implications

This chapter presents a summary of the study and important findings drawn from the data presented in Chapter 4. It provides recommendations for higher education, administrators, higher education staff like financial aid counselors, and parents of first-generation college students.

The limitations of the study are also described. The chapter concludes with recommendations for further research.

Summary of the Study

This study explored the lived experiences of first-generation college seniors to better understand the presence of impostor phenomenon during their college journey. This study also examined perceived experiences related to resilience and persistence among first-generation students that helped them on the journey to graduation.

Overview of the Problem. According to Bird (2018), the American dream means everyone having an equal chance to succeed. However, the reality is that people in America, especially students attending America's institutions of higher learning are starting off at different places and for some, it is hard to overcome the barriers to succeed. This study has explored impostor phenomenon as a barrier to first-generation college student success. It is no wonder that according to a national study, first-generation college students are less likely to persist to graduation from college compared to their peers with college educated parents (NCES, 2018).

Much of the literature recognized impostor phenomenon as a valid barrier to first-generation students' degree completion, including struggles with self-doubt and

feelings of fraudulence (Clance, Dingman, Reviere, & Stober, 1995; Clance & Imes, 1978). The literature also showed how experiences related to resilience and persistence such as institutional support (Brewer, 2011) and campus engagement (Davis, 2010; Choy, 2001) play a significant role in helping first-generation college students reach degree completion. The literature, however, also exposed some gaps in the research devoted to tracking of the initial first-generation college students and how they navigated college, how successful first-generation students attain degree completion. There is a gap in longitudinal studies that follow successful first-generation students from matriculation to commencement. This study sought to fill these gaps by focusing on first-generation college seniors who have navigated impostor phenomenon from their first-year to senior year.

Purpose statement and Research Questions. The purpose of this mixed methods study was to explore the lived experiences of first-generation college seniors to better understand the presence of impostor phenomenon during their college journey. This study also examined experiences related to resilience and persistence among first-generation students that helped them on the journey to graduation. To further investigate the presence of impostor phenomenon experiences during the journey to graduation of first-generation college students and their experiences of resilience and persistence, the following research questions were utilized:

1. Do first-generation students experience impostor phenomenon during their journey to graduation?
2. If experienced, in what ways do students experience impostor phenomenon?

- 2b. How do students describe experiences of impostor phenomenon?
3. What perceived factors contribute to the resilience and persistence of first-generation students on the journey to graduation?

Review of methodology, overview of sample, data collection, and analysis.

A mixed methods descriptive approach was ideal to help address the research questions in this study. By using mixed methods, the researcher was able to combine both quantitative and qualitative approaches to better “understand a phenomenon fully than is possible using either quantitative or qualitative approaches alone” (Mills & Gay, 2016, p. 8). Specifically, this study applied what Creswell (2015) referred to as the explanatory sequential design, first consisting of quantitative data collection and analysis and then the qualitative part. Findings from the quantitative phase were used in the data collection, analysis, and interpretation of the qualitative data obtained through student interviews. One of the strengths of the explanatory sequential design is that the researcher was able to use qualitative findings to elaborate on or explain the quantitative findings (Mills & Gay, 2016). The sample consisted of 51 first-generation college seniors, each of whom completed the survey and, 6 interviews were purposefully selected for the qualitative exploration phase. Data were analyzed through description of the case, as well as key themes that arose through the descriptive statistics, and coding. Coding included two cycles; In Vivo Coding and Pattern Coding.

Synopsis of data analysis. Key findings conveyed that all six interview participants knew about impostor phenomenon and had experienced it at some

point during their four years of college. Some participants mentioned that they discovered in their senior year that the feelings of self-doubt and fraudulence they had long felt was impostor phenomenon. Nelly recalled that, “I’ve learned impostor syndrome this past year. I was watching a video and this term came up and I was like, what is that? I was looking online too and I was like, this literally is my life.” This study affirmed one of my assumptions that some first-generation students experience impostor phenomenon but they may not know that the feelings of self-doubt and fraudulence they feel have a name; and that name is impostor phenomenon.

The research design utilized both quantitative and qualitative approaches to explore impostor phenomenon and experiences of resilience and persistence among first-generation college students during their journey to graduation. A mixed methods approach was used because it allowed for triangulation of the data, with the literature thus helping to form a solid foundation for the study and its design. Survey data and interview feedback were used to analyze and address the research questions.

There is numerous research that already focuses on first-generation college students and also an abundance of research that discusses impostor phenomenon. However, this study provided first-hand narratives of impostorism of first-generation college students and their experiences of resilience and persistence

Findings

The description of the findings and interpretation of themes directly connect to the analysis of quantitative and qualitative data presented in chapter 4.

Impostor phenomenon. An overwhelming theme that arose from this study is that many first-generation college seniors have experienced and still experience feelings related to impostor phenomenon on their journey to graduation. All six interview participants said they were familiar with impostor phenomenon and were able to describe impostor phenomenon in their experiences. For example, Ally said she was familiar with impostor phenomenon because “as someone in the arts field, I think it’s that much harder to feel like you’re competent, when there are so many talented artists, and they make better art than you do.”

Of the 51 quantitative participants, 35 identified as female and 14 identified as male. Results from the Clance Impostor Phenomenon Scale (CIPS) indicated that females are more likely than males to have intense impostor experiences (48% and 7% respectively). The finding is that first-generation female students experience a higher intensity of impostor feelings when compared to the first-generation male students.

Of the 45 participants that completed the CIPS, 11 experienced low/moderate impostor feelings. According to the CIPS scoring, participants that scored between 0 and 60 points on the CIPS indicated low/moderate feelings of impostorism. Due to low frequencies, low and moderate categories were combined. Of the 11 low/moderate frequencies, seven identified as male and 3 identified as females. Moreover, 19 participants shared experiences of frequent impostor feelings, meaning they scored

between 61-80 points. Of the 19, six were male and 12 identified as females. Additionally, 15 participants experienced intense feelings of impostorism, scoring 81 points and above. Of the 15, one identified as male, while 14 identified as female. From these findings, it is therefore safe to conclude that female first-generation college seniors experienced a higher intensity of impostor feelings compared to first-generation senior male students.

Self-doubt. Another frequent finding from the study was that first-generation college seniors experienced self-doubt as a direct relation to having impostor phenomenon. Some of the interview participants shared that they doubted their own abilities (Wilke, 2018). For example, Nelly shared that, “I always feel like I’m always self-doubting. I always feel like, it was probably someone’s mistake.” Nelly was referring to the academic scholarship was offered and the internship that followed. She added that:

With even that scholarship, I was just like, oh my God, no, there is no way that I got it. It just always feels like there’s some sort of self-doubt that comes with these like accomplishments that I’ve gotten throughout the years.

Ally shared that, “I’ve felt like I hadn’t belonged in my department for the majority of my time at XY [name of university has been changed].” She added that, “It was only after I started taking more communications and business classes for fun that I realized I’m not an idiot, and I am creative and smart.”

Andy shared experiences of self-doubt in his academics. He noted with added stress from taking classes during the pandemic, he was also taking a high level philosophy and business courses. Andy shared that:

I actually was not too skilled in, and I was doing very terribly in the classes, obviously. And because of the pandemic adding on top of that and being online and not having social interactions as much as I would like, it got me to really a low point where I was like, maybe I should drop out, maybe that'll be easier on me. Way easier if I just do that."

In addition, Richie also shared experiences related to self-doubt. His interview revealed that he experienced self-doubt depending on the classes he was taking. Richie expressed that:

I feel like the classes I'm in, if they are hard, then I'm just like, oh, yeah, I don't know how I got this far. And I'd say, I have felt like this pretty frequently though.

Comparison to others. Some of the interview participants shared how often they had compared themselves to their classmates and *felt, not good, or capable enough*. Dotty's interview found that she often compared herself with her classmates in professional majors such as nursing and engineering. As a biology major, Dotty shared that, "It seems like all of those students, once they graduate, they're set, and they can start practicing their profession." She added that, "As a Biology major, I was trying to figure out what it was I actually wanted to do."

Similarly, Andy's interview found that he also compared himself to his classmates. Andy shared that he compares himself to his friends in the engineering school while he is a business major. Andy's experience revealed how often first-generation students set high expectations for themselves when they compare themselves to their peers. Andy elaborated on his experience by saying:

I have engineering friends and they start talking to me about how they're in these high level math classes and that what business is doing isn't as important as what we're doing. It makes me feel like an impostor because it makes me feel very much more insignificant, in a way.

With a disability that often required her to miss class, Mandy's interview revealed her comparison to others. She shared that she has had to "almost work harder in case I do get sick or I do need to take more time off. I have to overcompensate and doing really well in college and pushing myself really hard." Nelly's interview also exposed the comparison to others that first-generation students experience. She shared that she being in a male dominated major and being "one of three girls in my class" caused her to feel inadequate. Nellie added, "I always feel like I'm always lacking in some sort and always second guess myself."

Experiences of resilience and persistence. This study found that regardless of feeling like impostors, having self-doubt, and comparing themselves to others, the participants also exhibited grit and resilience from their interview experiences.

Grit Scale findings. The study included 50 participants who completed the Grit Scale. Out of the 50, 34 identified as female and 14 identified as male. The two

participants were collapsed because they did not identify as either male or female. There was no significant difference between the mean values of males (41.6) and for females (39.8). However, I was cautious interpreting the mean distributions because of a small sample size, particularly in males ($N=14$). The Grit Scale scores were recorded in two categories 0-40 and above 40, and there was no significant differences between males and females.

Resilience Scale findings. The study included 49 participants completed the Connor-Davidson Resilience Scale, and 34 identified as female and 14 identified as male. Two respondents who did not identify as male or female were excluded. The study found that males had slightly higher mean on the resilience scale ($N = 14$, 72.5) than females ($N = 34$, 67.2). This difference in mean was not significant ($p < .25$). It is important to report that the mean value of the resilience scale in the sample (68.7) was significantly lower than in the general population (79). This may suggest that first-generation students as a whole have a much lower resilience level compared to the general U.S. population.

Interview findings related to resilience and persistence. This study found that first-generation students are able to persist by building “close relationships with my professor” as Mandy disclosed. Mandy added that during the COVID-19 pandemic, she “learned to also prioritize my rest and taking care of myself a bit more.” Self-care is important so as to avoid burnout for students, but for first-generation students in particular. Mandy attributed her persistence to degree completion to:

I've tried to seek out support from professors and other students around me. I think, especially in classes I haven't done as well in, I get nervous almost to reach out to the professor but I definitely try to talk to other students a lot and build relationships with people in my classes.

Andy, shared that he felt isolated and "previously I did go through a bunch of impostor syndrome because of the whole pandemic." Andy credits his persistence to degree completion to "friends here and they were helping me out, talking, giving me that little social advice that I needed." In addition, Andy found that being involved on campus helped him persist and build his resilience. Andy shared that he has been serving as a student ambassador with the first-generation student club at his college. An opportunity that has placed him in a position to mentor other first-generation students especially those in their first-year.

Conclusions. Overall, this study resulted in a variety of findings that can positively inform future first-year first-generation students, parents of first-generations students, professors, and higher education professional like financial aid counselors who work closely with first-generation students. Participants reported experiencing impostor phenomenon at the beginning and throughout their college journey. However, many shared positive experiences of resilience and persistence that have helped them on their journey to graduation as such mentorship from professors, campus involvement, and support from family and friends. First-generation students shared other challenges like cost of education and financial aid as other barriers to degree completion.

Limitations

There were some limitations to this study. First, due to the COVID-19 global pandemic and social distancing restrictions, face-to-face interviews were not an option. In addition, some of the participants attended college far away from the researcher, that even without the pandemic, face-to-face interviews would not be possible. The online meeting platform Zoom was an appropriate replacement, however in-person interviews would have been preferred by the researcher in the event, it was possible to travel to meet atleast some of the interviewees.

Second, the outcomes of the study were limited to only the participants that mostly fully completed the survey ($N = 51$) and 6 participated whose interviews were selected for the qualitative phase of the study. During the timeline that the survey was open, most colleges were either just beginning their fall semester or term and the students were continuing to experience a variety of challenges related to COVID-19, and it is probable that there may have been a lower response rate than in other, more typical school years. More participants were preferred to increase the sample size and gather more perspectives.

Third, the researcher was not able to learn how many first-generation college students are currently in their senior year and due to graduate in the spring nationwide, and hence a response rate was unable to be determined and calculated. Institutions of higher education define first-generation college students differently. Most of the numbers schools have about their first-generation college students are self-reported and thus the actual number of first-generation college students nationwide is unknown.

Fourth, the Grit Scale used in the study was one found online and it indicated that it was free to use. The researcher emailed the author and creator of the scale, Dr. Angela Duckworth requesting to use the survey and to ask for any information pertaining to the use of the survey and did not hear back. Although this instrument provided valuable and relevant data for this study, it was preferred to hear back from Duckworth regarding the scale.

Recommendations

The results of this study highlighted several recommendations to support first-generation college students on the journey to graduation. The recommendations are focused on four groups: Future first-year first-generation college students, parents of first-generation students, professors, and Higher Education: College staff such as, financial aid counselors. In addition, the fifth theme [Advice: Support for first-generation students and positive affirmations] from the qualitative data findings contributes to the recommendations discussed here.

Recommendations for future first-year first-generation students. Interview question 6 asked the first-generation student to look back to their first-year in college and offer that first-year student advice on overcoming impostor phenomenon. Ally recommended that, “Push back. Push back every time because you do know what you are doing, and you cannot let them [referring to anyone discouraging] affect you because they think they have the upper hand in a situation. Nellie offered her first-year self-advice saying, “I think the major thing is separating feelings from fact.” Nellie elaborated on that advice adding:

Because you feel something in some certain way, but in actuality that is not how you are. I think it is just having confidence to know what you are capable of doing and embracing your differences and not self-doubting a lot especially, if you going into a male dominated area.

As a first-generation student ambassador on his college campus, Andy recommended that first-generation students should not be afraid to go and experience new things. He added that, “I would tell my freshman self to take advantage of the free time that I had and make friends and join clubs.”

The researcher recommends that higher education universities and colleges create as part of first-year student orientation a first-generation student specific session. This session will enable first-generation students meet each other at the beginning of the school year, be told of resources that their campuses provide to help support them toward degree completion.

Recommendations for parents of first-generation students. Familial aspects play a role in the journey to graduation of first-generation students. First-generation college students are the first in their families to go to college and they pave the way to higher education for not only for themselves but for their families, all while facing many challenges (Canning, LaCrosse, Kroeper, & Murphy, 2020).

The six interview participants offered advice to parents of first-generation college students. When asked what she would offer parents, Ally responded that, “You need to validate our feelings, but push your student to see that they are worth it, they are doing it. Pull out the old works if you have to.” Mandy mentioned that: “I think a

lot of first-generation parents really don't have the capacity to do a ton of research because they are busy working or taking care of the family." She recommended that, "If they do have that capacity, to do research around financial aid, about scholarships, and around ways that you can support your student or your child." Mandy added that parents of first-generation students should remember that, "First that they're a child, not that they're just a student. It is important to emphasize that."

Richie noted that, "I don't think parents understand how difficult college is for students in general, but especially for first-generation college students." Richie recommended for more understanding and support from parents of first-generation students who would like to pursue graduate or professional degrees after college. He commented that:

For example, with myself, since I am trying to go into medical school and going all these routes, for my parents, they can barely understand why after my bachelor's degree, I would want to apply to graduate school.

Nellie shared that "for my situation, my parents did not know what kind of college I was getting into, or what helped me with my career and stuff like that." She therefore recommended that parents of first-generation students give "them the love and support that they need. To be the person their kid could come back to and just share their experiences and stuff. Just being a support system throughout the whole college experience."

Recommendations for higher education. There are various stakeholders within the institutions of higher education that work closely with students. The

recommendations herein are directed toward financial aid counselors. Financing and affording college is a significant barrier to first-generation student persistence to degree completion. First-generation college students are predominately non-white and come from low-income families and are often the first to navigate college admissions and financial aid applications (The Postsecondary National Policy Institute, 2021).

Some of the recommendations that six interview participants offered include Ally's advice to financial aid counselors. Ally said, "Don't tell the first-generation students if they can't afford it [referring to affording college] they shouldn't be here. It doesn't help."

Mandy recommended for financial aid counselors to "approach the session with empathy and understanding because you never know what that student is dealing with." Mandy followed her advice and recommendation with a personal story:

There have been times where I've had to go to the financial aid office myself and write checks. I am overwhelmed, and dealing with money like that is super stressful. Having to call my parents, figure out loan disbursement, all that. It is confusing and overwhelming.

Nellie offered this recommendation to colleges and universities, "I think it awesome that we have a first-gen club and association at XY [name of school has been changed]." Nellie recommended that having a club or social gathering space for first-generation students on their college campus will help "foster a group of students who have the same commonality." She added that some social clubs and groups "are where first-gen students could share their own experiences and learn from each other."

Recommendations for professors. Ally recommended that professors, “Do not play favorites, offer the same opportunities to everyone for both social events and individual mentorship.” Richie shared that his academic advisor “did a pretty good job at preparing me for post-college stuff, post college life.” He recommended that professors and academic advisors should help first-generation students “schedule out all four years at the beginning, rather than doing it semester by semester.” Richie recommended this because he shared that “during the last two semesters, I had pretty bad anxiety for registration, because I did not know if I was going to get in all the classes I needed to graduate on time.”

Dotty recommended that professors “be inclusive and encouraging of FGen students.” She added that she had “a few professors that I had at the beginning of the semester, prefaced saying, “I’m an FGen student myself.” Dotty added that:

Some professors gave out little information sheets for us to fill out in class, and one of the question being, are you an FGen student? I think it just helped us feel supported in a way that’s not even necessarily giving us special treatment. It’s just asking if it is an experience that we’re having.

On the other hand, Andy recommended that since some professors cannot directly ask students if they are first-generation, he encouraged first-generation students to “if you’re open to it, just let your teacher know that you are first-generation student.” Andy added that:

For the teachers, if that were to happen, I would take advantage of that. I feel like a teacher would be more willing to help out if they knew that, especially if

they are a first-generation teacher too. I think teachers should encourage first-generation students to go to office hours and talk to them.

Mandy recommended that professors remind first-generation students that, “You belong here, you are deserving of being here. Those kind of affirmations are really important.” Mandy’s recommendation came from a personal connection she had with one of her professors. Mandy shared that:

I had a professor in my freshman year who told us, “Even if I only teach you this once, if you have an issue two years later and you need someone to advocate for you, I will do that. I need you to just email me and I will always be a resource for you.” That kind of going above and beyond really instilled this sense of you *belong here*, you deserve to be believed because navigating an academic institution is difficult.

Last, Nelly another interview participant recommended that professors “just be patient and understanding of our situation.” Nelly elaborated that:

I think a lot of professors come in, just making the assumption that all students are the same and are held to the same standards. I think professors should be lenient and understanding of first-gen students because they do not have the knowledge or those hand-down stories of experiences of their parents, and how they went through college.

Nelly recommended that professors should be “another support system for first-generation students” and be “a mentor for that student to come to them to ask questions.”

Future Research

It would be ideal to conduct this study post COVID-19 pandemic and once again aim to survey first-generation students from across the country. It appears that due to unforeseen difficulties brought upon by the pandemic, the response rate was lower than desired. Due to low frequencies, for example low and moderate categories for the Clance Impostor Phenomenon Scale (CIPS) were combined. A greater response rate would help yield more responses and paint a diverse picture on impostor phenomenon among first-generation students.

It would also be beneficial to expand on this study by studying how first-generation college students who attain degree completion influence or impact their siblings who apply and enter college after them. A comparison study between first-generation college students and their following siblings. It would be interesting to compare experiences and investigate if impostor phenomenon is experienced by siblings of first-generation students and what their factors of resilience and persistence are.

More future research examining and comparing experiences of first-generation students and their non-first-generation peers [traditional students] would be ideal. This study has showed that first-generation do experience impostor phenomon. The students in the study also shared their perceived factors that contributed to their resilience and persistence on the journey to graduation. A comparison study between first-generation student and traditional students would compare experiences of

impostor phenomenon and the perceived factors that help traditional students succeed and whether some of those factors can be applied to first-generation college students.

The survey used in this study provided good responses from the first-generation college seniors on their experiences of impostor phenomenon, resilience, and persistence. Future studies with larger sample sizes will potentially be able to run more statistical tests such as ANOVAs, correlations, informative chi-squares, and even t-tests. Due to limited variation with the sample size for this study, age was not included in the analyses done. Future studies would benefit from including age in the study because a good number of first-generation students are considered non-traditional students, attending college past the traditional college-going age. Having a larger sample size and being able to run more statistical tests would help to reveal if there is a connection between age, being a first-generation student and persistence or resilience. A comparison of mean using a larger sample size would be ideal to investigate a difference in mean between gender and resilience, persistence and gender.

Additionally, the interview phase of the study provided some good recommendations needed to continue supporting first-generation students to degree completion. For example, the interview question that explored what advice first-generation would offer other individuals such as parents and professors, provided qualitative responses that could be converted into measurable quantitative and action items to support future first-generation students.

Conclusion Remarks

First-generation college students face many barriers on their journey to graduation such as less familial guidance on how to navigate college, usually lower grades, and they drop out of college at a higher rate (Cataldi, Bennett, & Chen, 2018; Terenzini, Springer, Yeager, Pascarella, & Nora, 1996; U.S. Department of Education, 2017). This study investigated a prominent and usually invisible barrier that first-generation college students struggle with on their journey to graduation. This barrier is impostor phenomenon. According to a new research study, first-generation students are more likely to struggle with impostor phenomenon in competitive science courses, technology, engineering, and in mathematics (STEM) (Canning, LaCrosse, Kroeper, & Murphy, 2020).

This study revealed that females were more likely to have intense impostor feelings of impostor phenomenon within their academic and social experiences. Some interview participants highlighted feeling inadequate and comparing themselves to their classmates in Science and Business majors. This finding is supported by research that states that comparison and classroom competition with other students cultivated feelings of self-doubt and fraudulence among first-generation students, hence increasing impostor feelings (Hutchins, 2015; Leary, Patton, Orlando, & Funk, 2000; Parkman, 2016).

The researcher discovered that first-generation students benefitted from institutional programs or clubs on their college campuses that supported first-generation students. This discovery highlights the need for increased programming

and intentional institutional support for first-generation students in order to increase their persistence and degree completion.

This study also found that familial aspects such as pride, finances, understanding, and encouragement was a determining factor towards the resilience and persistence of first-generation students on their journey to graduation. Dotty, one of the interview participants contributed that she has a young sister that is applying to college. Now that she has had experiences as a first-generation student, dealing with applying and entering college, Dotty mentioned that, “It is my responsibility to make sure that she files her FAFSA, help her with applications, and I am glad to do.” Dotty’s experience gives way to a new study that can examine how experiences of first-generation college students impact or influence their siblings that are entering college after their first-generation older sibling.

The first-generation college seniors that participated in this study especially those that participated in the one-on-one interviews overcame their fear to share their experiences on impostor phenomenon and factors of resilience and persistence. Their candid voices and experiences will hopefully encourage other first-generation students, add to the need for institutions of higher education to continue investing in programs and intentional support for this vulnerable student population. It is important for first-generation college students to know they belong on their college campuses, and that their dreams of attaining an education are valid.

To my fellow first-generation college students, I leave you these words from the unrivalled Tina Turner from her 2013 interview with Oprah Winfrey (Fernandez, 2019).

My legacy is that I stayed on course ... from the beginning to the end, because I believed in something inside of me. So my legacy is a person that strived for wanting it better and got it.

References

- American College Health Association. (2008). American College Health Association – National College Health Assessment Spring 2007 Reference group data report (abridged). *Journal of American College Health*, 56, 469-479.
- Association of American Colleges and Universities. (2019). *College students are more diverse than ever. Faculty and administrators are not*. Retrieved from <https://www.aacu.org/aacu-news/newsletter/2019/march/facts-figures#:~:text=While%20the%20racial%20and%20ethnic,3>).
- Anderson, J. D. (2002). Race in American higher education: Historical perspectives on current conditions. In P.G. Altbach, K. Lomotey & W.A. Smith (Eds.), *The racial crisis in American higher education* (revised ed., pp. 3-22). Albany, NY: State University of New York Press.
- Astin, A. (1993). *What matters in college: Four critical years revisited*. San Francisco, CA: Jossey-Bass.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bechtoldt, M. N. (2015). Wanted: Self-doubting employees-Managers scoring positively on impostorism favor insecure employees in task delegation. *Personality and Individual Differences*. 86, 482-486.
- Billson, J. M., & Terry, M. B. (1982). In search of the silken purse: Factors in attrition among first-generation students. *College and University*, 58(1), 57–75.

- Bird, G. (2018). *The impact of parents' education levels*. Retrieved from <https://www.insidehighered.com/news/2018/02/08/students-postsecondary-education-arcs-affected-parents-college-backgrounds-study>
- Blackmon, W. (2018). *A sequential explanatory mixed-method study of the impostor phenomenon experiences of first-generation students of color at a predominately white institution*. ProQuest Dissertations Publishing. Retrieved from <https://search.proquest.com/docview/2123079418>
- Bonnano, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist*, 59, 20-28.
- Bourdieu, P. (1977). Cultural reproduction and social reproduction. In J. Karabel & A. H. Halsey (Eds.). *Power and ideology in education*. Oxford University Press.
- Brewer, M. (2011). *Student success: A qualitative analysis of the engagement of the successful first-generation student*. ProQuest Dissertations Publishing. Retrieved from <http://search.proquest.com/docview/864832977/>
- Brown, O. G., & Phi Delta Kappa. Educational Foundation. (1997). *Helping African-American students prepare for college*. Bloomington, IN.: Phi Delta Kappa Educational Foundation.
- Byrd, D. R. and McKinney, K. J. (2012). Individual, interpersonal, and institutional level factors associated with the mental health of college students. *Journal of American College Health*, 60(3), 185-193.

- Cabrera, N., & Padilla, A. (2004). Entering and succeeding in the “culture of college”: The story of two Mexican heritage students. *Hispanic Journal of Behavioral Sciences*, 26(2), 152-170. <https://doi.org/10.1177/0739986303262604>
- Canning, E. A., LaCosse, J., Kroeper, K. M., & Murphy, M. C. (2020). Feeling like an imposter: The effect of perceived classroom competition on the daily psychological experiences of first-generation college students. *Social Psychological and Personality Science*, 11(5), 647–657. <https://doi.org/10.1177/1948550619882032>
- Carleton, R. N., Collimore, K. C., McCabe, R. E., & Antony, M. M. (2011). Addressing revisions to the Brief Fear of Negative Evaluation scale: Measuring fear of negative evaluation across anxiety and mood disorders. *Journal of Anxiety Disorders*, 25(6), 822–828. <https://doi.org/10.1016/j.janxdis.2011.04.002>
- Carleton, R. N., McCreary, D. R., Norton, P. J., & Asmundson, G. J. G. (2006). Brief Fear of Negative Evaluation Scale-revised. *Depression and Anxiety*, 23(5), 297–303.
- Cataldi, E. F., Bennett, C. T., Chen, X. (2018). First-generation students: College access, persistence, and post-bachelor’s outcomes. Washington, DC: National Center for Education Statistics, U.S. Department of Education. Retrieved from <https://nces.ed.gov/pubs2018/2018421.pdf>
- Center for First-Generation Student Success. (2019a). *About the center*. Retrieved from <https://firstgen.naspa.org/about-the-center>

Center for First-Generation Student Success. (2019b). *First-gen forward*. Retrieved from <https://firstgen.naspa.org/programs-and-services/first-forward/first-forward>

Center for First-Generation Student Success. (n.d.a). *First-generation college students: Demographic characteristics and postsecondary enrollment*. Washington, D.C: NASPA. Retrieved from <https://firstgen.naspa.org/files/dmfile/FactSheet-01.pdf>

Center for First-Generation Student Success. (n.d.b). *First year experience, persistence, and attainment of first-generation college students*. Washington, D.C: NASPA. Retrieved from <https://firstgen.naspa.org/files/dmfile/FactSheet-02.pdf>

Chae, J. H., Piedmont, R. L., Estadt, B. K., & Wicks, R. J. (1995). Personological evaluation of Clance's impostor phenomenon scale in a Korean sample. *Journal of Personality Assessment*, 66, 468-485. doi.org/10.1207/s15327752jpa6503_7

Chaney, B., Muraskin, L. D., Cahalan, M. W., & Goodwin, D. (1998). Helping the progress of disadvantaged students in higher education: The federal student support services program. *Educational Evaluation and Policy Analysis*, 20(3), 197–215. <https://doi.org/10.3102/01623737020003197>

- Chemers, M. M., Hu, L., & Garcia, B. F. (2001). Academic self-efficacy and first-year college student performance and adjustment. *Journal of Educational Psychology, 93*(1), 55-64.
- Chen, X., & Carroll, C. D. (2005). First-generation students in postsecondary education: A look at their college transcripts (NCES 2005-171). Washington, DC: National Center for Education Statistics.
- Cheng, D. X. (2004). Students' sense of campus community: What it means, and what to do about it. *NASPA Journal, 41*(2), 216-234.
- Choy, S. P. (2001). *Students whose parents did not go to college: Postsecondary access, persistence, and attainment*. Washington, DC: U.S. Department of Education. Retrieved from <https://link.gale.com/apps/doc/A153701806/AONE?u=s8474154&sid=AONE&xid=2025b750>
- Chrisman, S. M., Pieper, W. A., Clance, P. R., Holland, C. L., & Glickauf-Hughes, C. (1995). Validation of the Clance Imposter Phenomenon Scale. *Journal of Personality Assessment, 65*(3), 456-467. doi:10.1207/s15327752jpa6503_6
- Clance, P. R. (1985). *The impostor phenomenon: Overcoming the fear that haunts your success*. Atlanta, GA: Peachtree Publishers Ltd.
- Clance, P. R. (1985). *The impostor phenomenon: When success makes you feel like a fake*. Toronto, Canada: Bantam Books.
- Clance, P., Dingman, D., Reviere, S., & Stober, D. (1995). Impostor phenomenon in an interpersonal/social context: Origins and treatment. *Women & Therapy, 16*(4), 79-96. https://doi.org/10.1300/J015v16n04_07

- Clance, P. R., & Imes, S. (1978). The impostor phenomenon in high achieving women: Dynamics and therapeutic intervention. *Psychotherapy: Theory, Research & Practice*, 15(3), 241-247. doi:10.1037/h0086006
- Clark, H. (2017). "Imbalance:" Mental health in higher education. *Humboldt Journal of Social Relations*, 39, 346-348. Retrieved from <http://www.jstor.org/stable/90007891>
- Collier, P. J., & Morgan, D. L. (2008). "Is that paper really due today?": Differences in first-generation and traditional college students' understanding of faculty expectations. *Higher Education*. 55(4), 425-446.
- Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety*, 18, 76-82. doi: 10.1002/da.10113
- Conroy, D. E., Willow, J. P., & Metzler, J. N. (2002). Multidimensional fear of failure measurement: The performance failure appraisal inventory. *Journal of Applied Sport Psychology*, 14(2), 76-90. doi:10.1080/10413200252907752
- Cowman, S. E., & Ferrari, J. R. (2002). "Am I for real?" Predicting impostor tendencies from self-handicapping and affective components. *Social Behavior and Personality: An International Journal*, 30(2), 119-126.
- Cozzarelli, C., & Major, B. (1990). Exploring the validity of the impostor phenomenon. *Journal of Social and Clinical Psychology*, 9(4), 401-417. doi:10.1521/jscp.1990.9.4.401

- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry & research design: Choosing among five approaches* (4th ed.). Thousand Oaks, CA: SAGE.
- Creswell, J. W. (2015). *A concise introduction to mixed methods research*. Thousand Oaks, CA: SAGE.
- Creswell, J. W. (2015). Mixed methods designs. In *educational research: Planning, conducting, and evaluating quantitative and qualitative research* (5th ed.). Upper Saddle River, N.J.: Pearson Merrill Prentice Hall.
- Creswell, J. W. (2013). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. (4th ed.). Boston, MA: Pearson Education, Inc.
- Creswell, J. W., & Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory into Practice*, 39(3), 124-130.
- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research*. (2nd ed.). Thousand Oaks, CA: SAGE.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: SAGE.
- Curtin, M., & Fossey, E. (2007). Appraising the trustworthiness of qualitative studies: Guidelines for occupational therapists. *Australian Occupational Therapy Journal*, 54, 88-94.
- Dancy, T. E. & Brown, M. C. (2011). The mentoring and induction of educators of color: Addressing the impostor phenomenon in academe. *Journal of School Leadership*, 21(4), 607–634. <https://doi.org/10.1177/105268461102100405>

- Davis, J. (2010). *The first-generation student experience: Implications for campus practice and strategies for improving persistence and success*. Sterling, VA: Stylus Publishing.
- Dingman, D. J. (1988). The impostor phenomenon and social mobility: You can't go home again. *Dissertation Abstracts International, Section A. Humanities and Social Sciences*, 49(6-B), 2375.
- Doménech-Betoret, F., Abellán-Roselló, L., & Gómez-Artiga, A. (2017). Self-efficacy, satisfaction, and academic achievement: The mediator role of students' expectancy-value beliefs. *Frontiers in Psychology*, 8, 1193. <https://doi.org/10.3389/fpsyg.2017.01193>
- Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, 9, 1087-1101.
- Dudau, D. (2014). The relation between perfectionism and impostor phenomenon. *Procedia - Social and Behavioral Sciences*, 127, 129–133. doi: 10.1016/j.sbspro.2014.03.226
- Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, 41(10), 1040-1048. doi:10.1037/0003-066X.41.10.1040
- Eisenberg, D., Downs, M. F., Golberstein, E., & Zivin, K. (2009). Stigma and help seeking for mental health among college students. *Medical Care Research and Review*, 66, 522–541.

- Eisenberg, D., Hunt, J., & Speer, N. (2013). Mental health in American colleges and universities: Variation across student subgroups and across campuses. *The Journal of Nervous and Mental Disease*, 201, 60–67.
- Engle, J., & Tinto, V. (2008). *Moving beyond access: College success for low-income, first generation students*: Retrieved from [http://www.coenet.us/files/nies-Moving Beyond Access 2008.pdf](http://www.coenet.us/files/nies-Moving%20Beyond%20Access%202008.pdf)
- Espinosa, L. L., Turk, J. M., Taylor, M., & Chessman, H. M. (2019). *Race and ethnicity in higher education: A status report*. Washington, DC: American Council on Education. Retrieved from <https://1xfsu31b52d33idlp13twtos-wpengine.netdna-ssl.com/wp-content/uploads/2019/02/Race-and-Ethnicity-in-Higher-Education.pdf>
- Fernandez, C. (2019). *Tina Turner's most empowering quotes*. Retrieved from <https://www.oprahmag.com/life/g25308226/tina-turner-quotes/?slide=6>
- Ferrari, J. R., & Thompson, T. (2006). Impostor fears: Links with self-presentational concerns and self-handicapping behaviours. *Personality and Individual Differences*, 40(2), 341-352. doi: 10.1016/j.paid.2005.07.012
- Flett, G. L., & Hewitt, P. L. (Eds.). (2002). *Perfectionism: Theory, research, and treatment*. Washington, DC: American Psychological Association.
- Fried-Buchalter, S. (1992). Fear of success, fear of failure, and the imposter phenomenon: A factor analytic approach to convergent and discriminant validity. *Journal of Personality Assessment*, 58(2), 368-379.
doi:10.1207/s15327752jpa5802_13

- Frost, R. O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research, 14*(5), 449–468.
doi:0.1007/BF01172967
- Hamm, W. E., & Gilliard, M. D. (2007). *First in my family: A profile of first-generation college students at four-year institutions since 1971*. Los Angeles: CA. Higher Education Research Institute, UCLA.
- Harvey, J. C. (1981). *The impostor phenomenon and achievement: A failure to internalize success* (Unpublished doctoral dissertation). Temple University, Philadelphia, PA.
- Harvey, J. C., & Katz, C. (1985). *If I'm so successful, why do I feel like a fake? The impostor phenomenon*. New York, NY: St Martin's Press.
- Henning, K., Ey, S., & Shaw, D. (1998). Perfectionism, the impostor phenomenon and psychological adjustment in medical, dental, nursing and pharmacy students. *Medical Education, 32*(5), 456-464. doi:10.1046/j.1365-2923.1998. 00234.x
- Hodges-Payne, T. (2006). *Perceptions of first-generation college students: Factors that influence graduate school enrollment and perceived barriers to attendance* (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3223320)
- Holmes, S. W., Kertay, L., Adamson, L. B., Holland, C. L., & Clance, P. R. (1993). Measuring the impostor phenomenon: A comparison of Clance's IP scale and Harvey's I-P scale. *Journal of Personality Assessment, 60*(1), 48-59.

- Horn, L., & Nunez, A. M. (2000). Mapping the road to college: First-generation students' math track, planning strategies, and context of support. *Education Statistics Quarterly*, 2(1), 81–86.
- Horn, L. J., & Premo, M. D. (1995). *Profile of undergraduates in U.S. postsecondary education institutions: 1992-93*. Retrieved from <https://nces.ed.gov/pubs/96237.pdf>
- Hsiao, K. P. (1992). *First-generation college students*. Retrieved from ERIC database. (ED351079)
- Hurtado, S. & Carter, D. F. (1997). Effects of college transition and perceptions of the campus racial climate on Latino college students' sense of belonging. *Sociology of Education*, 70(4), 324–45.
- Hutchins, H. M. (2015). Outing the imposter: A study exploring imposter phenomenon among higher education faculty. *New Horizons in Adult Education & Human Resource Development*, 27, 3–12.
doi:10.1002/nha3.20098
- Irlbeck, E., Adams, S., Akers, C., Burris, S., & Jones, S. (2014). First-generation college students: Motivations and support systems. *Journal of Agricultural Education*, 55(2), 154-166. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1122313.pdf>
- Ishitani, T. (2006). Studying attrition and degree completion behavior among first-generation college students in the United States. *The Journal of Higher Education*, 77, 861–85.

- Ishitani, T. (2003). A longitudinal approach to assessing attrition behavior among first-generation students: Time-varying effects of pre-college characteristics. *Research in Higher Education, 44*(4), 433-449.
- Jamelske, E. (2009). Measuring the impact of a university first-year experience program on student GPA and retention. *Higher Education, 57*, 373-391.
doi:10.1007/s10734-008-9161-1
- John, G., & Stage, F. K. (2014). Minority-serving institutions and the education of U.S. Underrepresented students. *New Directions for Institutional Research, 2013*(158), 65-76. <https://doi.org/10.1002/ir.20046>
- Johnson, D. R., Soldner, M., Leonard, J. B., Alvarez, P., Inkelas, K. K., Rowan-Kenyon, H., & Longerbeam, S. (2007). Examining sense of belonging among first-year undergraduates from different racial/ethnic groups. *Journal of College Student Development, 48*(5), 525–542.
<https://doi.org/10.1353/csd.2007.0054>
- Joyce, C. (2015). Unheard voices: First generation students and the community college. Retrieved from
https://pdfs.semanticscholar.org/3b7a/4d0db43b6b3c71262d59a667ac76bba0cc0b.pdf?_ga=2.76639383.384778073.1593377072-2000528294.1589928077
- Kets de Vries, M. F. (2005). The dangers of feeling like a fake. *Harvard Business Review, 83*(9), 108-116, 159.

- Kim, Y. K., & Sax, L. J. (2009). Student–faculty interaction in research universities: Differences by student gender, race, social class, and first-generation status. *Research in Higher Education* 50(5), 437–59.
- Knights, D. & Clarke. C. A. (2013). It’s a bittersweet symphony, this life: Fragile academic selves and insecure identities at work. *Organization Studies*. 35(3), 335–357.
- Kuh, G. D. (2003). What We’re learning about student engagement from NSSE: Benchmarks for effective educational practices. *Change: The Magazine of Higher Learning* 35(2), 24–32.
- Kumar, S., & Jagacinski, C. M. (2006). Imposters have goals too: The imposter phenomenon and its relationship to achievement goal theory. *Personality and Individual Differences*, 40, 147-157. doi: 10.1016/j.paid.2005.05.014
- Langford, J. (1990). The need to look smart: the impostor phenomenon and motivations for learning (Doctoral dissertation). *Dissertation Abstracts International*, 51, 3604B.
- Langford, J., & Clance, P. R. (1993). The impostor phenomenon: Recent research findings regarding dynamics, personality and family patterns and their implications for treatment. *Psychotherapy*, 30(3), 495-501. doi:10.1037/0033-3204.30.3.495
- Leary, M. R. (1983). *A brief version of the Fear of Negative Evaluation Scale*. *Personality and Social Psychology Bulletin*, 9(3), pp. 371-375.
doi/10.1177/0146167283093007

- Leary, M. R., Patton, K. M., Orlando, A. E., & Funk, W. W. (2000). The impostor phenomenon: self-perceptions, reflected appraisals, and interpersonal strategies. *Journal of Personality*, 68(4).
- Lee, J. L., Sax, L. J., Kim, K. A., & Hagedorn, L. S. (2004). Understanding students' parental education beyond first-generation status. *Community College Review*, 32(1), 1-21. doi: 10.1177/009155210403200101
- Lin, N. (2001). *Social capital: A theory of social structure and action*. Cambridge, UK: Cambridge University Press.
- Luthar, S. S. (Ed.). (2003). *Resilience and vulnerability*. Cambridge, UK: Cambridge University Press.
- Lynch, M. (2013, January 23). It's tough to trailblaze: Challenges of first-generation college students. *Diverse Issues in Higher Education*. Retrieved from <https://diverseeducation.com/article/50898/>
- Malterud, K. (2001). Qualitative research: Standards, challenges and guidelines. *The Lancet*. 358(9280), 483-488.
- Mangan, K. (2015). The challenge of the first-generation student. *Chronicle of Higher Education*. Retrieved from <https://www.chronicle.com/article/The-Challenge-of-the/230137>
- Martin, M. (2018). Investigations of the Impostor Phenomenon among Female First-Generation College students and a Research University [ProQuest Dissertations Publishing]. <http://search.proquest.com/docview/2046826091/>

- Martin, A. J. (2009). Motivation and engagement across the academic life span: A developmental construct validity study of elementary school, high school, and university/college students. *Educational and Psychological Measurement*, 69(5), 794-824. doi:10.1177/0013164409332214
- Martinez, J. A., Sher, K. J., Krull, J. L., & Wood, P. K. (2009). Blue-collar scholars?: Mediators and moderators of university attrition in first- generation college students. *Journal of College Student Development*, 50(1), 87-103.
- Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologists*, 56, 227-238.
- Masten, A. S., & Coatsworth, J. D. (1998). Psychoeducation as a response to community disaster. *Brief Treatment and Crisis Intervention*, 53, 1-10.
- Matthews, G., & Clance, P. R. (1985). Treatment of the impostor phenomenon in psychotherapy clients. *Psychotherapy Private Practice*. 3, 71-81.
doi.org/10.1300/J294v03n01_09
- McCay, V.C., & Estrella, J. (2008). First-generation student success: The role of faculty interaction in service-learning courses. *Communication Education*, 57(3), 356-372. doi:10.1080/03634520801966123
- McClelland, D. C. (2001). Achievement motivation. In W. E. Natenmeyer, & J. T. McMahon. (Eds.), *Classics of organizational behavior* (3 ed., pp. 73-80). Long Grove, IL: Waveland Press, Inc.
- McDonough, P. M. (1997). *Choosing colleges: How social class and schools structure opportunity*. Albany, NY: State University of New York Press.

- McElwee, R. O., & Yurak, T. J. (2010). The phenomenology of the impostor phenomenon. *Individual Differences Research*, 8(3), pp. 184-197.
- McGregor, L. N., Gee, D. E., & Posey, K. E. (2008). I feel like a fraud and it depresses me: The relation between the imposter phenomenon and depression. *Social Behavior and Personality: An international journal*, 36(1), 43-48.
doi:10.2224/sbp.2008.36.1.43
- Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). San Francisco, CA: Jossey-Bass.
- Megginson, R. E. (2016). Facing the imposter phenomenon within. *Stem & Culture Chronicle*. Retrieved from <https://medium.com/stem-and-culture-chronicle/the-imposter-phenomenon-7be778a445de>
- Miles, B. M., Huberman, A. M., & Saldana, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Thousand Oaks, CA: Sage.
- Mitchell, K. (1997). Making the grade: Help and hope for the first-generation college student. *ERIC Review*, 5(3), 13-15.
- Mojtabai, R., Stuart, E. A., Hwang, I., Eaton, W. W., Sampson, N., & Kessler, R. C. (2015). Long term effects of mental disorders on educational attainment in the national comorbidity survey ten-year follow-up. *Social Psychiatry and Psychiatric Epidemiology*, 50, 1577–1591.
- Moustakas, C.E. (1994). *Phenomenological research methods*. Thousand Oaks, CA: SAGE Publications.

- Narayan, A. (2011, August 15). *U.S. higher education glossary*. Retrieved from <https://www.usnews.com/education/best-colleges/articles/2011/08/15/us-higher-education-glossary#S>
- National Center for Education Statistics. (2019, March 31). U.S. college enrollment statistics for public and private colleges from 1965 to 2016 and projections up to 2028 (in millions) [Graph]. Retrieved from <https://www.statista.com/statistics/183995/us-college-enrollment-and-projections-in-public-and-private-institutions/>
- National Center for Education Statistics. (2013). Integrated postsecondary education data survey. Retrieved from <http://nces.ed.gov/ipeds/>
- National Student Clearinghouse Research Center. (2019, July 10). Persistence and retention-2019. Retrieved from <https://nscresearchcenter.org/snapshotreport35-first-year-persistence-and-retention/?hilite=%27persistence%27>
- Nettles, M. T. (1991). Racial similarities and differences in the predictors of college student achievement. In Allen, W. R., Epps, E. G., & Haniff, N. Z., (Eds.). *College in black and white: African-American students in predominantly white and in historically black public universities* (pp. 75-94). Albany, NY: State University of New York Press.
- Nicholas, L., & Isles, A. (2016). Pushing and pulling emerging adults through college: College generational status and the influence of parents and others in the first year. *Journal of Adolescent Research*, 32(1), 155-169. <https://doi.org/10.1177/0743558415586255>

- Nunez, A. M., Cuccaro-Alamin, S. (1998). *First-generation students: undergraduates whose parents never enrolled in postsecondary education*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.
- Parkman, A. (2016). The imposter phenomenon in higher education: Incidence and impact. *Journal of Higher Education Theory and Practice*, 16, 51.
- Pascarella, E., & Terenzini, P. (2005). *How college affects students: A third decade*. San Francisco, CA: John Wiley & Sons, Inc.
- Pascarella, E. T, Pierson, C. T, Wolniak, G. C., & Terenzini, P. T. (2004). First-generation college students: Additional evidence on college experiences and outcomes. *The Journal of Higher Education*, 75(3), 249-284. Retrieved from www.jstor.org/stable/3838816
- Peraltra, K. J., & Klonowsk, M. (2017). Examining conceptual and operational definitions of “first-generation college students” in research on retention. *Journal of College Student Development*, 55(4), 630-638. Retrieved from <https://muse.jhu.edu/article/663313>
- Pike, G. R., & Kuh, G. D. (2005). First- and second-generation college students: A comparison of their engagement and intellectual development. *The Journal of Higher Education*, 76(3), 276–300. Retrieved from http://muse.jhu.edu/journals/journal_of_higher_education/v076/76.3pike.html
- Pizzolato, J. E. (2003). Developing self-authorship: Exploring the experiences of high-risk college students. *Journal of College Student Development*, 44(6), 797–812. Retrieved from

http://muse.jhu.edu/journals/journal_of_college_student_development/v044/44.6pizzolato.html

- Planty, M., Kena, G., & Hannes, G. (2009). *The condition of education 2009 in brief no. 2009-082*. Washington, DC: National Center for Education Statistics.
- Pryor, J. H., Hurtado, S., Saenz, V. B., Lindholm, J. A., Korn, W. S., & Mahoney, K. M. (2006). *The American freshman: National norms for Fall 2005*. Los Angeles, CA: Higher Education Research Institute, UCLA.
- Rendon, L. I., Jalomo, R. E., & Nora, A. (2000). Theoretical considerations in the study of minority student retention in higher education. In Braxton, J. M. (Ed.), *Reworking the student departure puzzle* (pp. 127-156). Nashville, TN: Vanderbilt University Press.
- Richardson, R. C. & Skinner, E. F. (1992). Helping first generation minority students achieve degrees. In Zwerling, L. S & London, H. B (Vol. Eds.), *First-generation students: Confronting the cultural issues* (pp. 29-43). New Directions for Community Colleges (No. 80).
- Riehl, R. J. (1994). The academic preparation, aspirations, and first-year performance of first-generation students. *College and University*, 70(1), 14-19.
- Ross, S. R., Stewart, J., Mugge, M., & Fultz, B. (2001). The imposter phenomenon, achievement dispositions, and the five-factor model. *Personality and Individual Differences*, 31, 1347-1355. doi:10.1016/S0191-8869(00)00228-2
- Saenz, V. B., Hurtado, S., Barrera, D., Wolf, D., & Yeung, F. (2007). *First in my family: A profile of first-generation college students at four-year institutions*

since 1971. Los Angeles, CA. Higher Education Research Institute, University of California, Los Angeles. Retrieved from <https://www.heri.ucla.edu/PDFs/pubs/TFS/Special/Monographs/FirstInMyFamily.pdf>

Sagar, S., & Stoeber, J. (2009). Perfectionism, fear of failure, and affective responses to success and failure: The central role of fear of experiencing shame and embarrassment. *Journal of Sport & Exercise Psychology*, 31(5), 602-627.

Saldaña, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). Thousand Oaks, CA: Sage.

Saldaña, J. (2009). *The coding manual for qualitative researchers* (2nd ed.). Thousand Oaks, CA: Sage.

Schunk, D. H., Pintrich, P. R., & Meece, J. L. (2008). *Motivation in education: Theory, research and applications* (3rd ed.). Upper Saddle River, NJ: Merrill-Prentice Hall.

Skomsvold, P. (2015). *Web tables-profile of undergraduate students: 2011-12*. Washington, D.C.: U.S Department of Education. Retrieved from <https://nces.ed.gov/pubs2015/2015167.pdf>

Somers, P., Woodhouse, S., & Cofer, J. (2004). Pushing the boulder uphill: The persistence of first-generation college students. *NASPA Journal*, 41, 418-435.

Sonnak, C., & Towell, T. (2001). The impostor phenomenon in British university students: Relationships between self-esteem, mental health, parental rearing

- style and socioeconomic status. *Personality and Individual Differences*, 31(6), 863-874. doi:10.1016/S0191-8869(00)00184-7
- Soria, K. M., & Stebleton, M. J. (2012). First-generation students' academic engagement and retention. *Teaching in Higher Education* 17(6): 673–85.
- Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.
- Staklis, S., & Chen, X. (2010). *Web tables-profile of undergraduate students: Trends from selected years, 1995-96 to 2007-2008*. Washington, D.C.: U.S. Department of Education. Retrieved from <https://nces.ed.gov/pubs2010/2010220.pdf>
- Stanton-Salazar, R. D. (1997). A social capital framework for understanding the socialization of racial minority children and youth. *Harvard Educational Review*, 67, 1-40.
- Stephens, N. M., Fryberg, S. A., Markus, H. R., Johnson, C. S., & Covarrubias, R. (2012). Unseen disadvantage: How American universities' focus on independence undermines the academic performance of first-generation college students. *Journal of Personality and Social Psychology*, 102(6), 1178-1197.
- Stoeber, J., & Childs, J. H. (2010). The assessment of self-oriented and socially prescribed perfectionism: Subscales make a difference. *Journal of Personality Assessment*, 92(6), 577-585. doi:10.1080/00223891.2010.513306

- Stoecker, J., Pascarella, E. T., & Wolfle, L. M. (1988). Persistence in higher education: A 9-year test of a theoretical model. *Journal of College Student Development, 29*(3), 196–209.
- Summers, M. & Volet, S. (2008). Students' attitudes towards culturally mixed groups on international campuses: Impact of participation in diverse and non-diverse groups. *Studies in Higher Education 33*(4): 357–70.
- Swail, W. S., & Perna, L. W. (2000). *A view of the landscape: Results of the National Survey of Outreach Programs. In outreach program handbook 2001* (pp. xvii-xxix). New York: NY. College Board.
- Swecker, H. K., Fifolt, M., & Searby, L. (2013). Academic advising and first-generation college students: A quantitative study on student retention. *NACADA Journal 33*(1): 46–53.
- Taylor, R. D., & Wang, M. C. (Eds.). (2000). *Resilience across contexts: Family, work, culture, and community*. Mahwah, NJ: Lawrence Erlbaum.
- Tanjula, P. (2014). Motivating first-generation students to academic success and college completion. *College Student Journal, 48*(1), 133–140.
- Terenzini, P. T., Springer, L., Yaeger, P. M., Pascarella, E. T, & Nora, A. (1996). First-generation college students: Characteristics, experiences, and cognitive development. *Research in Higher Education, 37*, 1-22.
- The Postsecondary National Policy Institute. (2021). *Factsheets. First-generation students*. Retrieved from <https://pnpi.org/first-generation-students/>

- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition*. (2nd ed.). Chicago: IL: University of Chicago Press.
- Tinto, V. (1987). *Leaving college: Rethinking the causes and cures of student attrition*. Chicago: IL: University of Chicago Press.
- Topping, M. E., & Kimmel, E. B. (1985). The imposter phenomenon: Feeling phony. *Academic Psychology Bulletin*, 7, 213-226.
- Topping, M. H. (1983). The impostor phenomenon: A study of its construct and incidence in university faculty members (Doctoral dissertation). Retrieved from *Dissertation Abstracts International*. (Order No. 8316534)
- Tuffold, L., & Neuman, P. (2010). *Bracketing in qualitative research*. *Qualitative Social Work*, 11(1), 80-96.
- Tusaie, K., & Dyer, J. (2004). Resilience: A historical review of the construct. *Holistic Nursing Practice*, 18, 3-10.
- Tym, C., McMillion, R., Barone, S., & Webster, J. (2004). *First-generation college students: A literature review*. Round Rock, TX: TG.
- U.S. Department of Education . (2017). Beginning postsecondary students longitudinal study 2012-2014 (*Report No. BPS:12/14*). Washington, DC: National Center for Education Statistics.
- Usher, E. L., & Pajares, F. (2008). Sources of self-efficacy in school: Critical review of the literature and future directions. *Review of Educational Research*, 78, 751-796.

- Vygotsky, L. S. (1978). *Mind in society. The development of higher psychological processes*. M. Cole, V. John-Steiner & E. Souberman (Eds.). Cambridge, MA: Harvard University Press.
- Want, J., & Kleitman, S. (2006). Impostor phenomenon and self-handicapping: Links with parenting styles and self-confidence. *Personality and Individual Differences*, 40(5), 961-971. <https://doi.org/10.1016/j.paid.2005.10.005>
- Warburton, E., Bugarin, C., Nunez, A., & Carroll, C. D. (2001). *Bridging the gap: Academic preparation and post-secondary success of first-generation students*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.
- Ward, L., Siegel, Michael J, & Davenport, Zebulun. (2012). *First-generation college students: Understanding and improving the experience from recruitment to commencement*. San Francisco, CA: Jossey-Bass.
- Watson, D., & Friend, R. (1969). Measurement of social-evaluative anxiety. *Journal of Consulting and Clinical Psychology*, 33(4), 448-457. doi:10.1037/h0027806
- Wilke, M. R. (2018). *Imposter phenomenon: Distinct construct or achievement-related affective experience?* (Order No. 13814872). Available from ProQuest Dissertations & Theses Global. (2207553528). Retrieved from <https://login.ezproxy-eres.up.edu/login?url=https://search.proquest.com/docview/2207553528?accountid=14703>

- Wilkinson, D., & Birmingham, P. (2003). *Using research instruments: A guide for researchers*. Psychology Press.
- Wirt, L. G., & Jaeger, A. J. (2014). Seeking to understand faculty-student interaction at community colleges. *Community College Journal of Research and Practice* 38(11): 980–994.
- Wise, B. J. (2003). Motivate at-risk students with meaningful work. *Education Digest*, 69(4), 39-42.
- Woosley, S. (2003) How important are the first weeks of college? The long-term effects of initial college experiences. *College Student Journal*, 37(2).
- Woosley, S., & Miller, A. (2009). Integration and institutional commitment as predictors of college student transition: Are third week indicators significant? *College Student Journal*, 43(4), 1260-1271.
- Woosley, S. A., & Shepler, D. K. (2011). Understanding the early integration experiences of first-generation college students. *College Student Journal*, 45(4), 700–714.
- World Health Organization. (2013). *Mental health action plan 2013–2020*. Retrieved from https://www.who.int/mental_health/action_plan_2013/bw_version.pdf?ua=1
- Yeh, T. L. (2010). Service-learning and persistence of low-income, first-generation college students: An exploratory study. *Michigan Journal of Community Service Learning*, 16(2), 50-65.

York-Anderson, D. C., & Bowman, S. L. (1991). Assessing the college knowledge of first-generation and second-generation college students. *Journal of College Student Development*, 32(2), 116–122.

Appendix A

IRB Approval from the University of Portland



Memorandum

To: Yvonne Kibombo Ayesiga
 From: John Orr, Ph.D.
 Date: 9/4/2020
 RE: IRB Notification of University of Portland Project #2020119

Dear Yvonne Kibombo Ayesiga:

On behalf of the University of Portland's federally registered Institutional Review Board (IRB00006544), a member of the Board has reviewed your research proposal, titled "Impostor phenomenon, experiences of resilience and persistence among first-generation college seniors." The IRB concludes that the project satisfies all IRB-related issues involving human subjects research under the "Exempt" classification. A printout of this memorandum should serve as written authorization from IRB to proceed with your research.

Projects classified as exempt based on Title 45, Part 46.104 of the Code of Federal Regulations do not require further review by University of Portland's Institutional Review Board unless you modify some portion of your project. If the study is modified, you must submit a Continued Review Form (located on the IRB website) for continuing review before continuing with your project.

Please note that you are required to abide by all requirements as outlined by the Institutional Review Board.

A copy of this memorandum, along with your Request for Review and its documentation, will be stored in the IRB Committee files for three years from the completion of your project, as mandated by federal law. If you have any questions, please contact me at irb@up.edu.

Respectfully,

A handwritten signature in black ink, appearing to read "John Orr".

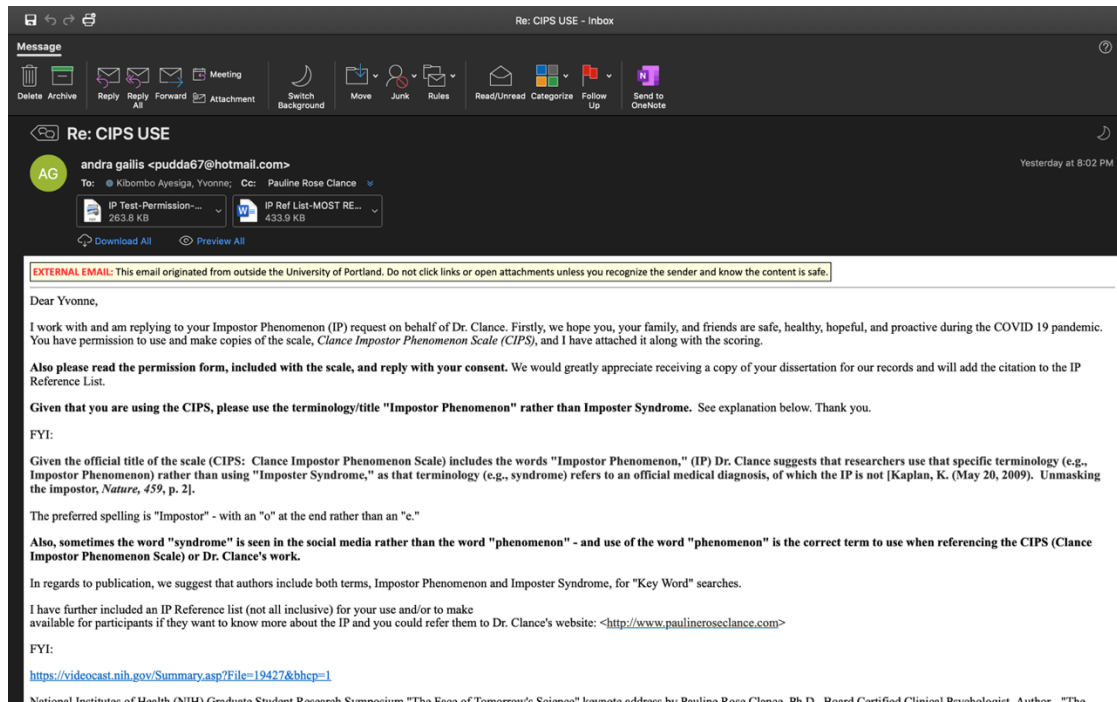
John C. Orr, Ph.D.
 Assistant Provost
 Chair, Institutional Review Board
 Professor of English

INSTITUTIONAL REVIEW BOARD

5000 N. Willamette Blvd., Portland, OR 97203-5798 T: 503.943.8264 irb@up.edu up.edu

Appendix B

Permission to use Clance Impostor Phenomenon Scale



Appendix C

Permission to Use Connor-Davidson Resilience Scale

Searching "Dissertation "

New Outlook ☐ Off ☐ On

from: "Jonathan Davidson"

Read/Unread Categorize Follow Up Filter Email Find a Contact Address Book Send & Receive Get Add-ins

Re: RISC Yvonne Ayesiga

Jonathan Davidson, M.D. <jonathan.davidson@duke.edu> Tuesday, August 11, 2020 at 10:50 AM

To: Kibombo Ayesiga, Yvonne

aCD-RISC-25 01-01-... 832.3 KB aRISC Manual 06-01-... 7.3 MB Scoring the CD-RIS... 342.3 KB

[Download All](#) [Preview All](#)

On 8/11/20, 10:42 AM, "mail cd-risc.com" <mail@cd-risc.com> wrote:

*** EXTERNAL EMAIL: This email originated from outside the University of Portland. Do not click links or open attachments unless you recognize the sender and know the content is safe. ***

Dear Yvonne:

Thank you for your reply. I have pleasure to enclose the RISC-25 and related material.

Wishing you the best of success in your work with the RISC.

Jonathan Davidson

> On August 11, 2020 1:23 PM Kibombo Ayesiga, Yvonne <ayesiga@up.edu> wrote:
>
>
> Good Afternoon Dr. Davidson,
> Please see attached the agreement form.
> I have also made the \$30 payment via PayPal.
> Thank you.
> Sincerely,
> Yvonne Kibombo Ayesiga
> Shipstad Hall Director
> University of Portland

Microsoft Excel

Appendix D

Email to Potential Survey Respondents

Dear Participant,

My name is Yvonne Ayesiga and I am conducting research as a part of my doctoral dissertation under the direction of Dr. Eric Anctil in the School of Education at the University of Portland. I am studying **Impostor Phenomenon among first-generation college seniors and the factors that contribute to resilience and persistence on the journey to graduation.**

Purpose of the Study

The purpose of this study is to explore the lived experiences of first-generation college seniors to understand the presence, or lack thereof, of impostor phenomenon during their college journey. In addition, the study seeks to examine how experiences of resilience and persistence among first-generation college students relate to the presence, or lack thereof, of impostor phenomenon.

What is Impostor Phenomenon? Impostor phenomenon is described as an individual's feelings of not being as capable or adequate as others may perceive or evaluate them to be. Symptoms include feelings of phoniness and self-doubt (Clance, 1985).

Resilience refers to students who regardless of economic, cultural, family, or other social barriers still succeed at a higher level (Cabrera & Padilla, 2004).

Persistence is the percentage of students who are able to return to college at any institution any given term year-to-year (National Student Clearinghouse Research Center, 201).

Participation

If you agree to participate in this study, you will be asked to complete an online survey to measure resilience, grit (persistence) and impostor phenomenon. Participating in this study is completely voluntary and anonymous. The survey should take approximately 10-15 minutes to complete. There are no known risks for participating in this study. The results of this study may be used in reports, presentations, and publications but the researcher will not identify you or your institution.

There are no known risks associated with this study. You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal rights because of your participation in this research study.

Your honest responses on the survey may help us understand more about impostor phenomenon, experiences of resilience and persistence among first-generation college

students. This research may help improve future services and supports for first-generation college students on the journey to college success.

After completing the survey, you will be entered in a drawing to win one of three \$20 Amazon gift cards by providing your name and contact information here: [LINK](#)

Thank you in advance for your consideration. If you have any other questions, please contact me at 503-943-7560 or e-mail me at ayesiga@up.edu. You may also contact Dr. Eric Anctil at 503-943- 7690 or email at anctil@up.edu. Questions or concerns about your rights as a research participant should be directed to the University of Portland Institutional Review Board, via e-mail at irb@up.edu. The study has received approval through the UP IRB process. Thank you in advance for your participation in this study. To take the survey, click on the following link: "[DO I EVEN BELONG HERE?](#)"

Sincerely,
Yvonne Ayesiga, Doctoral Candidate, University of Portland



Appendix E

Survey

We thank you for your time spent taking this survey.
Your response has been recorded.

Below is a summary of your
responses

[Download PDF](#)

Thank you for participating in this dissertation study. Each completed survey will be entered in a drawing to win one of three \$20 Amazon Gift Cards.

This survey will take approximately 20 minutes to complete. Please read the informed consent information below before continuing to the survey.

This survey is part of a research study by Yvonne Ayesiga, a doctoral candidate at the University of Portland. If you agree to participate, please fully complete the survey below. If you do not wish to participate, please do not complete the survey.

This is a confidential survey, and there are no anticipated risks to your participation in this survey. However, it is unlikely yet possible that a data breach could occur with the Qualtrics survey, and that the data may not be truly anonymous. All data will be kept in a password protected computer.

Participating in this research will help us better understand impostor phenomenon among first-generation college students and their experiences of resilience and persistence. However, there is no guarantee that you personally will receive any benefits from this research. Your participation is voluntary, and your decision whether or not to participate will not affect your relationship with your institution or the University of Portland. If you decide not to participate, you are free to withdraw your consent and discontinue participation at any time without penalty.

This survey is solely to understand your experiences, so please feel free to be completely honest in your responses.

If you have any questions about the study, please feel free to contact Ayesiga Yvonne at ayesiga@up.edu. If you have questions regarding your rights as a research subject, please contact the IRB (IRB@up.edu).

For each item, please check the box below that best indicates how much you agree with the following statements as they apply to you over the last month. If a particular situation has not occurred recently, answer according to how you think you would have felt.

	not true at all (0)	rarely true (1)	sometimes true (2)	often true (3)	true nearly all the time (4)
I am able to adapt when changes occur	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have at least one close and secure relationship that helps me when I am stressed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When there are no clear solutions to my problems, sometimes fate or God can help	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can deal with whatever comes my way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Past successes give me confidence in dealing with new challenges and difficulties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to see the humorous side of things when I am faced with problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having to cope with stress can make me stronger	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tend to bounce back after illness, injury, or other hardships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good or bad, I believe that most things happen for a reason	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I give my best effort no matter what the outcome may be	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe I can achieve my goals, even if there are obstacles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Even when things look hopeless, I don't give up	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During times of stress/crisis, I know where to turn for help	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Under pressure, I stay focussed and think	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	not true at all (0)	rarely true (1)	sometimes true (2)	often true (3)	true nearly all the time (4)
I prefer to take the lead in solving problems rather than letting others make all the decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am not easily discouraged by failure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think of myself as a strong person when dealing with life's challenges and difficulties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can make unpopular or difficult decisions that affect other people, if it necessary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am able to handle unpleasant or painful feelings like sadness, fear, and anger	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In dealing with life's problems, sometimes you have to act on a hunch without knowing why	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a strong sense of purpose in life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel in control of my life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like challenges	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I work to attain my goals no matter what roadblocks I encounter along the way	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I take pride in my achievements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The following statements may or may not apply to you. For the most accurate score, when responding, think of how you compare to most people-not just the people you know well, but most people in the world. There are no right or wrong answers.

	very much like me	mostly like me	somewhat like me	not much like me	not like me at all
I have overcome setbacks to conquer an important challenge	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New ideas and projects sometimes distract me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
sometimes distract me from previous ones	very much like me	mostly like me	somewhat like me	not much like me	not like me at all
My interests change from year to year	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Setbacks don't discourage me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have been obsessed with a certain idea or project for a short time but later lost interest	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am a hard worker	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often set a goal but later choose to pursue a different one	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have difficulty maintaining my focus on projects that make more than a few months to complete	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I finish whatever I begin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have achieved a goal that took years of work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I become interested in new pursuits every few months	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am diligent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

For each question, please circle the number that best indicates how true the statement is of you. It is best to give the first response that enters your mind rather than dwelling on each statement and thinking about it over and over.

I have often succeeded on a test or task even though I was afraid that I would not do well before I undertook the task.

- 1 (not at all true)
- ☐
- 2 (rarely)
- ☐
- 3 (sometimes)
- ☐
- 4 (often)
- ☐
- 5 (very true)
- ☐

I can give the impression that I'm more competent than I really am.

1 (not at all
true)

☐

2 (rarely)

☐

3 (sometimes)

☐

4

(often)

☐

5 (very true)

☐

I avoid evaluations if possible and have a dread of others evaluating me.

1 (not at all
true)

☐

2 (rarely)

☐

3 (sometimes)

☐

4

(often)

☐

5 (very true)

☐

When people praise me for something I've accomplished, I'm afraid I won't be able to live up to their expectations of me in the future.

1 (not at all
true)

☐

2 (rarely)

☐

3 (sometimes)

☐

4
(often)

☐
5 (very true)

☐

I sometimes think I obtained my present position or gained my present success because I happened to be in the right place at the right time or knew the right people.

1 (not at all
true)

☐
2 (rarely)

☐
3 (sometimes)

☐
4
(often)

☐
5 (very true)

☐

I'm afraid people important to me may find out that I'm not as capable as they think I am.

1 (not at all
true)

☐
2 (rarely)

☐
3 (sometimes)

☐
4
(often)

☐
5 (very true)

☐

I tend to remember the incidents in which I have not done my best more than those times I have done my best .

1 (not at all
true)

☐
2 (rarely)

☐
3 (sometimes)

☐
4
(often)

☐
5 (very true)

☐

I rarely do a project or task as well as I'd like to do it.

☐
1 (not at all
true)

☐
2 (rarely)

☐
3 (sometimes)

☐
4
(often)

☐
5 (very true)

☐

Sometimes I feel or believe that my success in my life or in my job has been the result of some kind of error.

☐
1 (not at all
true)

☐
2 (rarely)

☐
3 (sometimes)

☐
4
(often)

☐
5 (very true)

☐

It’s hard for me to accept compliments or praise about my intelligence or accomplishments.

1 (not at all
true)

☐

2 (rarely)

☐

3 (sometimes)

☐

4

(often)

☐

5 (very true)

☐

At times, I feel my success has been due to some kind of luck.

1 (not at all
true)

☐

2 (rarely)

☐

3 (sometimes)

☐

4

(often)

☐

5 (very true)

☐

I’m disappointed at times in my present accomplishments and think I should have accomplished much more.

1 (not at all
true)

☐

2 (rarely)

☐

3 (sometimes)

☐

4

(often)

☐

☐ 5 (very true)

☐

Sometimes I'm afraid others will discover how much knowledge or ability I really lack.

☐ 1 (not at all true)

☐

2 (rarely)

☐

3 (sometimes)

☐

4

(often)

☐

5 (very true)

☐

I'm often afraid that I may fail at a new assignment or undertaking even though I generally do well at what I attempt.

☐ 1 (not at all true)

☐

2 (rarely)

☐

3 (sometimes)

☐

4

(often)

☐

5 (very true)

☐

When I've succeeded at something and received recognition for my accomplishments, I have doubts that I can keep repeating that success.

☐ 1 (not at all true)

☐

2 (rarely)

☐
3 (sometimes)

☐
4
(often)

☐
5 (very true)

☐

If I receive a great deal of praise and recognition for something I've accomplished, I tend to discount the importance of what I've done.

☐
1 (not at all
true)

☐
2 (rarely)

☐
3 (sometimes)

☐
4
(often)

☐
5 (very true)

☐

I often compare my ability to those around me and think they may be more intelligent than I am.

☐
1 (not at all
true)

☐
2 (rarely)

☐
3 (sometimes)

☐
4
(often)

☐
5 (very true)

☐

I often worry about not succeeding with a project or examination, even though others around me have considerable

confidence that I will do well.

1 (not at all
true)

☐

2 (rarely)

☐

3 (sometimes)

☐

4

(often)

☐

5 (very true)

☐

If I’m going to receive a promotion or gain recognition of some kind, I hesitate to tell others until it is an accomplished fact.

1 (not at all
true)

☐

2 (rarely)

☐

3 (sometimes)

☐

4

(often)

☐

5 (very true)

☐

I feel bad and discouraged if I’m not “the best” or at least “very special” in situations that involve achievement.

1 (not at all
true)

☐

2 (rarely)

☐

3 (sometimes)

☐

4

(often)

☐ 5 (very true)

☐

Are you a first-generation college student (first in your immediate family to attend a four-year institution)?

- ☐ Yes, I am a first-generation college student
- ☐ No. I am not a first-generation college student

What year are you in college?

- ☐ First-year
- ☐ Sophomore
- ☐ Junior
- ☐ Senior

What is your major?

What is your race/ethnicity? Please select all that apply.

- ☐ Black/African-American
- ☐ White
- ☐ Asian/Asian-American
- ☐ Pacific Islander
- ☐ Native Alaskan/Native American
- ☐ Hispanic/Latino
- ☐ Multi-racial
- ☐ Other

What is your gender?

- ☐ Female

☐ Male

- ☐ Male
 - ☐ Non-binary
 - ☐ Prefer not to say
-

What is your age?

- ☐ Less than 23
 - ☐ 24 and older
-

What type of institution do you attend? Please select one that applies to you.

- ☐ Private college/university
 - ☐ Public college/university
-

I would like to dive deeper into understanding your experiences with impostor phenomenon and how your experiences of resilience and persistence have shaped your college journey through senior year. Would you be willing to participate in a 30-minute interview either by Zoom or phone call to help us better understand your experiences?

Your responses to the previous questions will still be held confidential even if you provide us with your email address to reach out to you to set-up an interview.

- ☐ Yes. Please provide an email address to contact you

- ☐ No.
-

Thank you for completing the survey! If you would like to enter the drawing for one of the \$20 Amazon Gift Cards, please click on this [LINK](#) to input your email address. By using a separate survey for your email address, your responses on this survey remain completely confidential.

Appendix F

Email to Potential Interview Participants

Dear First-generation Student,

Thank you for taking the time to complete my survey entitled: Do I belong here? This survey is part of my doctoral study in which I am exploring Impostor phenomenon among first-generation college seniors and how your experiences of resilience and persistence have helped you navigate college.

This year has definitely been a challenging one but I am confident that our resilience and persistence continues to help us carry on and make it through senior year, to graduation.

Am kindly reaching out because you indicated by saying YES to be interviewed as a way for me to better understand your experiences with impostor phenomenon and how your experiences of resilience and persistence have shaped your college journey through senior year. **Please use this link <https://calendly.com/fgen-interview-with-yvonne/first-gen-interview-with-yvonne?month=2020-11> to provide a time convenient for you to interview with me.**

Interviews will last approximately 30 minutes and will be held via Zoom, or by telephone if you prefer.

Remember that, I will not be using your real name/identity in my data analysis as a way to maintain confidentiality of my participants.

Thank you for taking the time to fill out the interview scheduling link.

Yvonne Ayesiga

Appendix G

Email to Interview Participant Prior to Interview

Hello _____,

Thank you for signing up to interview with me to help with my study.

Please see below the Zoom link for the interview. I am looking forward to hearing your experiences on _____.

Yvonne Ayesiga is inviting you to a scheduled Zoom meeting.

Topic: FGEN Interview with Yvonne

Time: This is a recurring meeting Meet anytime

Join Zoom Meeting

<https://uportland.zoom.us/j/99286497080>

Appendix H

Interview Protocol and Questions

My name is Yvonne Ayesiga. I am a doctoral candidate investigating Impostor phenomenon among first-generation college seniors and how your experiences of resilience and persistence have helped you on the journey to graduation.

This interview will help me learn more details about your experiences related to impostor phenomenon, and resilience and persistence. This research is important because first-generation students who come after you, parents of first-generation students, professors and policymakers rely on your voices and lived experiences to support first-generation students to degree completion.

This interview will take approximately 30 minutes.

Let's review the consent form. Your participation is voluntary and confidential. Do you still want to participate in the interview?

Do you have any questions before we begin?

So that I do not have to frantically write notes during our meeting, may I record our interview? The recorded interview will also be transcribed and a copy emailed to you for member checking.

1. You are the first person in your family to go to college. Can you tell me a little bit about what that means to you?
2. Using one word, describe/sum up your experience at your college/university.
Follow up question: Please explain why you chose this word.
3. Impostor phenomenon has been defined as an Individual's feelings of not being as capable or adequate as others may perceive or evaluate them to be. Symptoms include feelings of phoniness and self-doubt. Are you familiar with impostor phenomenon?

Follow up question: How would you describe impostor phenomenon in your experience?

4. How often did you feel like an impostor in college?

Follow up question: How did you deal with that situation?

- Probe for academic experiences of feeling like an impostor: How have you coped to reach senior year?

Example: if student still needs a probe or example to highlight when they felt like an impostor and how you overcame those feelings.

- Probe for social/cultural experiences of feelings like an impostor. How have you coped to reach senior year?

5. What advice would you offer your freshman year self on overcoming impostor phenomenon as a first-generation college student?

Follow up question: What factors have contributed to your resilience and persistence from first year to senior year?

6. What other advice would you offer other individuals such as:

1. Parents

2. Professors

3. College staff (financial aid officers, academic advisors etc.)

End with: Is there anything else I need to know about impostor phenomenon and your experiences that I did not ask?